

CALIFORNIA AND WESTERN MEDICINE

VOLUME XXVI

JUNE, 1927

No. 6

PERCY TODD PHILLIPS
PRESIDENT CALIFORNIA MEDICAL ASSOCIATION
1927-1928



AT the close of the second meeting of the fifty-sixth annual session of the House of Delegates the incoming president, Percy Todd Phillips, M. D., was escorted to the presidential chair by Morton R. Gibbons of San Francisco and Harlan Shoemaker of Los Angeles.

Doctor Phillips commended the outgoing president, William T. McArthur, and thanked him for his unfailing kindness and courtesy to all. For himself he expressed appreciation for the honor conferred upon him.

Our new president was graduated in 1889 from the Western Reserve University, took graduate work at the New York Polyclinic, 1893 and 1894; in Chicago, 1896, and in London and Nurnberg, 1901.

The presidential honor is not new to Doctor Phillips. The Nevada State Medical Society, conferred that title upon Doctor Phillips in 1896; he is a past president of his county society. In 1899-1900 Doctor Phillips was the first president of the Nevada Board of Medical Examiners, and since 1917 has continuously been president of the California Board of Medical Examiners.

During the war he served on the District Exemption Board, District 1, Division 2. He is a member of the Santa Cruz County Medical Society, the California and National Associations, and is affiliated also with the California Academy of Medicine, Pacific Coast Association of Railway Surgeons, and is a Fellow of the American College of Surgeons. His published articles deal with surgery and medical economics. His presidential address delivered at the fifty-sixth annual session was published in the April issue of CALIFORNIA AND WESTERN MEDICINE.

MEDICINE IN THE DEPARTMENT OF THE INTERIOR*

By HUBERT WORK, M. D., *Secretary of the Interior*
Washington, D. C.

MAY I speak of the Interior Department's activities in the field of medicine, educational, preventive, and in the application of medical and surgical relief.

The Department of the Interior is also a widespread medical activity of the Government, which carries out its health activity from the frozen fastnesses of the north by means of a floating hospital on the Yukon River in Alaska to the medical care and treatment of the Seminole Indians in the subtropical Everglades of Florida; from its magnificent institutions of research, education, remedial care and disease prevention on the east in Washington, D. C., to the semitropical shores of the Hawaiian Islands on the west.

Between these widely divergent points, the many and varied activities of this department, all encompassed under the general head of medicine, are almost startling in the breadth of their scope and in the means by which they are carried out. They vary from its group of massive institutions in Washington: Howard University, the national university of the negro race in America with its very complete medical college; Freedmen's Hospital, the center for the training of colored physicians of America and for the diffusion of knowledge of hygiene among the colored race of this country; Columbia Institution for the Deaf, where the most advanced methods in the education and training of deaf children are utilized; St. Elizabeth's Hospital, where research by clinic and laboratory, where instruction and training in the problems of psychology, neurology, and pathology of mental diseases, and where studies in mental hygiene and allied subjects are given attention; to the wonderful National Park system of this country, where safeguarding the health of millions of visitors is an urgent problem; to the Geological Survey, where studies and advice on ground waters of the United States for domestic and other purposes are made; to the Bureau of Pensions, with its staff of medical examiners numbering 4500, which provides examinations for thousands of war veterans, wherever they may be found.

The trained nurses of this department carry out their missions of mercy under the shadow of the totem pole in the far north; the field matrons, nurses, and doctors of the Indian Bureau afford relief from sickness, teach hygiene of person and sanitation of home within hearing of the incantations of the Indian medicine man. Its medicines and serums are carried by dog sled, by canoe, by aeroplane, and by the ubiquitous Ford.

Comprising the Department of the Interior are six bureaus and offices, two territories, four eleemosynary institutions, a great national park system, and a railroad. Of these fourteen activities of the department twelve have in part, or very largely, very definite medical activities of some character.

Surveying briefly the many diverse medical func-

tions of this department, we find that the Geological Survey makes investigations of ground water supplies for domestic use, for hospitals, for various states, counties, and municipalities, as well as investigations and reports upon the quality of these water supplies.

The Alaskan Railroad operates a base hospital at Anchorage, Alaska, where during the past fiscal year 1200 patients were treated, 260 surgical operations were performed, and 7973 hospital days relief given.

Our Bureau of Education makes investigations of the status of physical education and hygiene in American colleges; of educational and recreational features of summer camps; of the health of teachers of this country with reference to longevity, absence on account of illness, conditions affecting health, etc.; assists in campaigns with the National Congress of Parents and Teachers to send children to the first grade of school free from disease and physical defects. This bureau is responsible, also, for medical relief to the natives of Alaska, and in this work maintains six hospitals, one on the water which cruised 2200 miles on the Yukon River during the past season of navigation, with its eight physicians and twenty-two nurses. In 1926, 12,434 home visits were made among these native people, 11,147 patients were treated, 34,846 treatments were given, and 6989 days of hospital care provided.

The Bureau of Pensions has on its rolls a half million veterans of the various wars in which this country has been engaged. A large proportion of claims from these beneficiaries require physical re-examinations and a medical rating board to review such claims. This work is done by this bureau of the Interior Department. Its archives, some six millions of files, are veritable storehouses of not only valuable historical data, but genealogical and anthropological information as well.

The two territories under this department, Alaska and Hawaii, through their territorial Boards of Health carry out the usual health measures incident to the prevention and control of reportable diseases, vital statistics, sanitation, etc., to which the department has access.

The territorial Board of Health of Hawaii has a more centralized control of these activities and has to do, as you know, with sanitation, medical inspection of schools, pure food regulations, tuberculosis, leprosy, the operation of hospitals, vital statistics, etc.

The National Park Service administers nineteen national parks and thirty-two national monuments visited by more than two and a quarter million people last year. These recreational and educational playgrounds of America, in area cover more than 15,000 square miles, almost 10,000,000 acres in extent. Safeguarding the health of the millions of visitors to these wonder lands is one of the important functions of the National Park Service, and to this end safe water supplies, sanitary conveniences, properly controlled camping grounds, sewage facilities, mosquito control, and hospital services are provided.

The Columbia Institute for the Deaf, while primarily an educational institution, conducts studies with reference to the hearing of deaf or partially

* Read before the California Medical Association in General Meeting, at the Fifty-Sixth Annual Session, April 28, 1927.

deaf pupils, and to the combining of the senses of touch and sight as aids in the understanding of speech.

Howard University—the national university for the colored race, “the capstone of negro education”—with more than 2000 in its student body representing thirty-seven states and eleven foreign countries, conducts schools of medicine, dentistry, and pharmacy—a Class A institution—whose graduates practice in many states and give professional attention to our colored population.

Freedmen's Hospital, established in 1862, is now a prime factor in the training of colored physicians and in the diffusion of a knowledge of hygiene among colored people of this country. This hospital, covering an area of four city blocks in buildings and grounds, with Howard University in the background, extends its services to the indigent residents of the District of Columbia, to residents of the several states, to emergency cases, and others. During the past fiscal year, 4431 patients were treated, 2030 surgical operations were performed, 2050 anesthetics were administered, 19,262 patients received dispensary treatment, and 124,041 hospital days relief were given. This hospital also conducts a school for nursing for the benefit of the young women of the negro race, and this past year graduated twenty-two nurses, making a total of 423 young colored women holding nurses' diplomas from this school.

St. Elizabeth's Hospital, devoted to the treatment of patients from the District of Columbia, and of present and former members of the military and naval services who are suffering from mental diseases, treated 5114 patients during the past fiscal year and gave to these patients 1,607,095 hospital days relief. Its patients were representatives of seventeen races from thirty-two separate countries; in ages varying from under 15 years to more than 70 years, and with all variations in types and kinds of mental alienation.

St. Elizabeth's Hospital for government insane also conducts a strictly medical and surgical service for somatic conditions, a training school for nurses, instruction courses to students of the Army and Navy Medical schools, George Washington, Georgetown, and Howard universities, and in addition to its many allied clinical and laboratory facilities, carries out extensive research having to do with problems of organic lesions, the cause of, or associated with, mental diseases. Lectures on hygiene and educational problems in connection with mental disorders are also given to various welfare, parent-teacher, and other organizations. The publications of this institution are of high standing in the scientific and medical world. It is an outstanding comprehensive graduate medical school.

The Indian Bureau in its medical activities extends medical and surgical care and relief to approximately 225,000 Indian wards of the Government out of a total Indian population of this country of about 350,000 persons, exclusive of Alaska. It safeguards the health, and by precept and example teaches health and sanitation to almost 65,000 Indian school children in its 207 day schools

and boarding schools scattered over the Indian reservations.

Its field matrons and field nurses visit tepees, hogans, wickiups, and Indian homes of whatever character, to instruct in disease prevention, the sanitation of the home and personal hygiene. Its physicians conduct a rural practice among these Indian reservations where such Indians are unable or unwilling to accept medical care in the hospitals provided for their use. It is significant that year by year an increasing number of Indian babies are born in Indian Service hospitals.

The Indian Bureau also operates sanatoria and sanatorium schools, the former for the advanced cases of tuberculosis and the latter for the incipient cases among school children. It has a group of special physicians who travel from reservation to reservation where those suffering from trachoma, a veritable scourge among the Indian population of this country, may be treated. During the fiscal year past, more than 30,000 Indian patients were treated in the ninety-one hospitals of this bureau and 523,599 days of hospital relief were given. In the past two years, 36,218 Indians suffering from trachoma have been treated by surgical or medical procedure. This bureau has more than 120 full-time field physicians, 64 part-time physicians, 10 special physicians, 7 dentists, 138 nurses, and 37 field matrons engaged in this work. The Indian Medical Service has been reorganized with trained physicians assigned from the United States Public Health Service who officer the key positions of this service.

Summarizing briefly, there are conducted under this department more than 100 hospitals in which were provided during the past year 2,269,697 days of hospital relief; it teaches preventive medicine, extends relief, etc., to almost a quarter of a million of primitive people of this country; carries on researches into the causes of diseases of man; teaches the blind; enlightens the ignorant; safeguards the health in play and work of millions of our people in their daily life.

In these functions, it works in close cooperation with local, county, state, federal, and voluntary health organizations throughout the country, whose aid and assistance have contributed in no small part to the results so sketchily outlined here. In cooperation with other agencies, the Red Cross has provided nurses and nutrition workers; associations interested in the welfare of the Indians have provided services of various character; in states where there are large Indian populations their health agencies have and are working in health matters affecting Indians; religious organizations, women's clubs, etc., have contributed their great part; the Veterans' Bureau and state laboratories have been made available, and the United States Public Health Service has in very large measure made available both its facilities and its personnel. Such cooperation and services are here gratefully acknowledged.

The Interior Department has been described as “the fact-finding department for internal development”; “A Federal university for the people”; its mission is largely educational with many of its activities devoted to the discovery and dissemination of knowledge; with a curriculum covering many fields

of learning and its "faculty" including hundreds of scientists, specialists and professional men; its "student body," the people of the United States.

It is fact finding in that it searches out the presence of sickness, malnutrition, and insanitary conditions and distress and poverty among the primitive peoples of this country with the purpose of curing such disease, eliminating such insanitary conditions and relieving the distress and poverty by the application of remedial measures both with respect to disease conditions and in the building up of a better economic status among these people. Its nurses, its doctors, its matrons, its skilled specialists, are teaching preventive medicine as well as curative medicine to the thousands of beneficiaries of our Government through this department.

In the Interior Department medicine has come to mean the practice of theories of health which have been proven by experience together with the art and science of curing the sick.

THE PROFIT AND LOSS ACCOUNT OF MODERN MEDICINE*

By STUART MCGUIRE, M. D.
Richmond, Virginia

WONDERFUL progress has been made in medicine during recent years, but the profit has been attended by a loss which must be considered in balancing the account. In taking stock of the gain we will find inspiration for the future; in counting the cost we may guard against the undue sacrifices of the past.

The most distinct profit and loss are seen in medical education. About two decades ago it was recognized that an increasing number of low-grade practitioners were being graduated each year by medical colleges and licensed by state governments. An investigation of the medical schools showed that many of them were poorly equipped, had scant clinical material and lacked sufficient funds to secure the necessary time of efficient teachers. A deliberate and systematic movement was inaugurated to remedy this evil. By moral suasion, by state legislation and by the combined efforts of the better schools, the entrance requirements were advanced, the number and length of the teaching sessions were increased, the character and scope of the curricula were improved, and the minimum number and approximate pay of the full-time teachers were specified.

The result of this propaganda has been that the total number of medical schools in the United States has been reduced from 160 to 80, and the total number of medical students from 28,142 to 18,840. In other words, eighty medical schools, weak either educationally or financially, have ceased to teach, and 10,000 medical students not properly qualified for the profession have ceased to study.

The benefit of this movement is already markedly seen in the medical colleges, where the qualifications of the student are found improved and the character of the instruction more satisfactory. There has not yet been time for the benefit of the change

to be very apparent in medical practice, but the lessened number and improved quality of the graduates turned out each year will unquestionably in the end result in a great improvement in the ethics and efficiency of the profession.

The profit, however, has not been without its loss, and while we congratulate ourselves on what has been gained by this educational movement, it is only just to count what it has cost. Many worthy, although struggling, colleges have been put out of existence and their property practically confiscated, and many earnest and promising young men have been denied an opportunity to study medicine because of some defect in their preliminary high school or college education. Again, the modern medical school is not self-supporting and is a heavy financial tax on public funds or private philanthropy. Expensive laboratories, salaries of full-time instructors and the necessary provisions for clinical teaching, impose a cost that can never again be met by tuition fees. If each student were charged what it actually cost to teach him, none but the rich could afford to study medicine. The rich, as a rule, do not care to become doctors, and as doctors are a necessity and not a luxury the rich will have to be educated to contribute of their wealth to make doctors. Medical education has ceased to be a business and become a philanthropic work which must be supported by state appropriations and individual benefactions.

Finally the cost of the modern method of teaching is seen in the graduate himself. If he has not paid in money he has been made to pay in time for his education. He has been kept in the laboratory, lecture hall and the hospital ward, a nonproducer, dependent on others for his support, until he reaches an age at which most of his contemporaries are married and settled in life. He is conscious of the sacrifice he has made, and usually overappreciative of the attainments he has acquired. He desires to be a specialist, and will only do general practice as a means to an end. He is determined to locate in a city and unwilling to settle in the country, preferring to starve himself in the one rather than to starve his ambitions in the other.

This results in an urban congestion and rural depletion of medical men which has reached a point to give serious concern, and for which some remedy must be found. It has been proposed that special medical schools be operated to produce low-grade practitioners for country consumption, but this is impracticable and unthinkable.

The remedy for the evil is to make country practice less arduous and more profitable, and it is hoped that this will come about in time with the evolution of our social, economic, and political life. When we compare the conditions that exist in the country today with those which existed even twenty years ago, and recall the changes that have resulted from the good-roads movement, the development of the automobile, the installation of the telephone, phonograph and radio, the introduction of the parcel post and rural mail delivery, the improvement of the public school system, the perfection of heating and lighting plants and the invention of labor-saving machinery, it is not difficult to believe that in the not far distant future the life of the country doctor

* Read before the California Medical Association in General Meeting at the Fifty-Sixth Annual Session. April 25-28, 1927.

will become one that will attract and hold the best representatives of the profession.

Having considered the profit and loss account of modern medical education we now come to what we have gained and lost in the doctor himself. The physician of the old school was usually a gentleman by birth and breeding. He was given a classical education, not because of his future profession, but because it was a privilege accorded his brothers as well as himself, without reference to their future vocations in life. His preparation for practice consisted in reading medicine for a few months in a preceptor's office and then attending lectures for one or two years at a medical college. His very lack of technical training gave him independence and resourcefulness, and with experience he gained an ability to make a diagnosis by intuition and to apply treatment, which, while often empirical, was usually effective. He was no specialist but attended every member of the household, because a family was a unit and his art was catholic. He knew the constitution of his patient because neighbor married neighbor and lived where they were born. He was not only physician but friend, confidant and counselor as well. In his personal affairs he was unbusinesslike, rarely sending bills, but accepting such honoraria as were tendered him in settlement of his accounts. In public affairs he was prominent, and his views and opinion had weight in matters of church and state. He had his weaknesses and his faults. Measured by modern standards he was ignorant and sometimes mischievous, but he served well his day and generation and was a most lovable old aristocrat.

The modern medical man begins to be trained for his profession while yet a boy. His preliminary education in high school and college is scientific rather than classical, and gives him knowledge rather than culture. When he completes his four years' course in a medical college and one year postgraduate work in a hospital he represents an investment in time and money covering a period of from fourteen to sixteen years. He is no longer a boy, but an eminently practical man, and he regards his calling as more a business than a profession. He recognizes the fact that he lives in an age of specialization, that no one man can now meet all the professional needs of a patient, and that the day of the domination of the family physician on the one hand and the dependence of the family on the other has passed. He understands that with the freedom now customary of choosing different attendants to treat separate ailments, the factors of social position, family connection and even personal friendship count for little, but that a doctor is employed because he is believed to be the most efficient man available to relieve the patient or cure the disease. He recognizes the necessity of sobriety, industry, honesty and clean living, but he also knows that the public no longer measures experience by age, virtue by matrimony, or morality by affiliation with the church, and that the first and last prerequisite for success is professional ability.

Such being the situation with which he has to deal the modern medical man early chooses a special line of work, and devotes every effort and util-

izes every opportunity to perfect himself in it. His attitude to the public has changed, and he no longer cloaks his reasons in secrecy or his actions in mystery, but deals frankly with his patients, explains cause and effect, and secures their cooperation in carrying out treatment. The modern doctor has discarded the silk hat and frock coat of his predecessor and put on the sack suit of the business man. In a sense he has become commercial. His offices are not only provided with instruments of diagnostic precision, but also with the most modern methods of keeping accounts and collecting fees.

From the foregoing crude pen picture must be inferred what has been the profit and what the loss to the public and to the profession from the modern doctor. We have lost a character dear to literature, and gained a successor perhaps less ethical and more mercenary, but certainly a scientific instrument of greater professional efficiency.

The development of the modern specialist is a source of both profit and loss to medicine. The profit is too apparent to need emphasis. The specialist, by concentration of study and limitation of practice to certain definite organs or diseases, is able in a few years to acquire a greater diagnostic skill and more successful methods of treatment in his special line of work than another man of equal ability would obtain in a lifetime of general practice.

The presence of a specialist in a community not only gives to patients suffering with certain diseases opportunities for efficient treatment, but also offers to the surgeon and general practitioner a consultant whose opinion and advice are often invaluable. While the profit side of the specialist's account is large, still on the opposite page we find some items of loss. The high esteem in which the specialist is held, and the pecuniary rewards which his services command have made him a victim of imitators and impostors, both inside and outside the pale of profession. Modern medicine is not responsible for the quacks and charlatans, but it is responsible for the members of the regular profession found in every town and city who claim to be specialists, but who really do a general practice, and for others who, while they may limit their work to certain diseases, are not qualified as experts, and have no more knowledge or experience than the average general practitioner.

Again the specialist, although an expert, is often narrow in his views and prejudiced in his opinions, so that he finds explanations for every symptom in the derangement of the organs he treats. His patients often suffer from special attention and general neglect. Motes are pulled out of the eyes and beams are left in the belly, or the abdomen is invaded for real or supposed appendicitis, and the lungs are left to fight their own battle with tuberculosis.

Finally, the specialist is an expensive friend to the patient. It is an everyday experience for the surgeon or general practitioner to send an obscure case, first to the pathologist for the examination of his blood, urine and sputum, then perhaps in turn to the roentgenologist, the cystoscopist, the ophthalmologist, and the dermatologist. The patient goes the rounds submitting himself to exhaustive exami-

nations and his pocketbook to depletion. The system is not essentially wrong. Unquestionably the patient is better cared for than formerly. To the well-to-do, while the cost is great, it is not prohibitory. To the poor, the public and private charities are open where they can get the same services dispensed in no less efficient but in less luxurious fashion. The real sufferer is the great middle class. Caught between penury and pride, without the price to pay but with the desire to conceal their poverty, they are often limited to an inferior grade of service.

Teamwork is essential to carry out the modern system of examinations. It is best seen in the staff of a dispensary where every patient has at his command the services of specialists in all diagnostic lines. This method has given such satisfactory professional services to the poor that an attempt is now being made in numerous parts of the country to apply it to those who are able to pay in the form of the modern medical clinic.

These clinics consist of a number of physicians, surgeons, and specialists united as a firm or corporation who occupy a building especially designed for the purpose to which it is devoted where patients can be conveniently, expeditiously and efficiently examined and treated and charged a combined bill through a central office for the entire services rendered.

The advantages of a clinic to a patient are that he has immediately available the opinion and advice of various specialists. He has the benefit of laboratories equipped with instruments of modern diagnostic precision. He is carefully and systematically examined and abnormal conditions of which he was ignorant are often discovered in time for their arrest or cure. He is charged a single fee for the diagnostic study of his case which does not exceed a fixed amount. The objections of the system to a patient are that to a degree he sacrifices his individuality and becomes less a person and more a case. He has to trust to the reputation of the clinic for the ability of the specialists to whom he is referred, and while all clinics have specialists it is equally true that all specialists are not experts.

He is subjected to a routine method of examination which works the greatest good to the greatest number, but sometimes imposes an individual hardship, as it may yield negative results, and the only benefit to the patient is the satisfaction of knowing he has been thoroughly studied and that he has no organic disease. Again a patient may learn from a complete examination that he has some unimportant physical disability of which he was previously ignorant, and once possessed of this knowledge he may be obsessed with a desire to have it corrected and insist on submitting himself to unnecessary or even injurious treatment.

The advantages that a clinic offers to a member of its staff are that he is free from professional expenses and has a guaranteed salary, and if the clinic prospers he will prosper with it. He is relieved of business worries that go with private practice and can devote his time and thought to professional work. He works in an agreeable atmosphere, comes into frequent contact with congenial associates, and is stimulated mentally by the pro-

fessional problems that are discussed daily at small conferences and more formally at the regular meetings of the staff. The greatest joy, however, comes from his satisfaction of feeling that he has the opportunity and facilities for doing high-class work, and that in doubtful cases he can share responsibility by calling in consultation other members of the staff in whom he has trust and confidence.

The objections of the system to a member of the staff are financial and personal. No mature professional man who has achieved marked financial success can become a member of a clinic with the expectation that his salary will ever be as large as the money he previously earned in private practice, and no young man beginning the practice of medicine can enter a clinic with the hope that he will ever earn as much money as he would do if he ultimately attained conspicuous success in private practice.

The answer to the objection as it applies to the older man is that if he continues his work as an individual he must struggle on despite failing strength and health, and when he dies his work dies with him, whereas if he becomes a member of a clinic he can retire gradually and gracefully, and when he dies his work will be carried on by the organization. The answer to the objection as it applies to the younger man is that the salary paid by the clinic offers the certainty of a comfortable living, that the work in the clinic gives him a training and experience which will lead to the development of his professional ability, and that if later in life he is dissatisfied with the position in which he finds himself he can resign from the staff when an advantageous opportunity offers.

The personal objections are a little more difficult to state and answer. A man when he becomes a member of the staff of a clinic loses in some degree his independence and in all of his actions he will have to consider how what he does will effect the interest of the clinic. Again, becoming a member of a clinic, while it tends to closer personal friendships within the organization, sometimes leads to a narrowing of the circle of acquaintances, or even possibly the alienation of former friends. It is very important for a clinic to minimize this danger by the adoption of a proper policy and the maintenance of a generous attitude to the general medical profession. If this is not done the members of the staff may suffer from professional isolation and even professional ostracism.

A medical clinic is no royal road to success. At the beginning the sum total of the patronage will be less than the sum total of the patronage of the individuals who constitute the staff. If the patronage grows, it will be for the same reason that the individual succeeds, namely, a recognition by the public and profession of satisfactory service rendered.

While a medical clinic is a business enterprise and its primary purpose is the care of the individual patient, it would be a poor group of professional men who would not strive to develop the possibilities it affords for philanthropic, educational, and scientific work. Means should be provided for the examination and treatment of indigent patients,

courses should be established for the instruction of nurses, dietitians, technicians and medical graduates, an advantage should be taken of the opportunity offered by the combination of clinical and laboratory facilities to carry on research work.

To achieve its highest success, a medical clinic should not only have a body and a brain, but a conscience and a soul as well.

One of the most wonderful gains made in modern medicine is in the exact diagnosis of disease by laboratory methods. For a time our knowledge of etiology and pathology was vague and indefinite, but one after another great discoverers have cleared the field and given us definite facts with which to work. Diatheses and dyscrasias, miasmatic and idiopathic diseases are no longer mentioned; the terms scrofula, blood poison and typhomalarial fever are no longer employed, and even the identity of neurasthenia and autointoxication are questioned.

We now diagnose the existence of tuberculosis, not by hectic fever, but by the demonstration of Koch's bacillus. We diagnose malaria, not by the therapeutic test of quinin, but by the presence of the plasmodium of Laveran. Widal has given us the agglutination test for typhoid and Wassermann the reaction which shows the presence or absence of syphilis. The white blood count tells the degree of infection and resistance of the patient, and is not only a test of importance in making prognosis, but often indicates the proper time for intervention. The microscopic examination of tissue differentiates benign from malignant tumors, and in operation for cancer the frozen section will often tell the surgeon when he has reached the limit of the disease. The x-ray shows the existence of fractures and the position of fragments, locates the presence of stones in the kidney, ureter or bladder, and by perfection of technique demonstrates the passage of a test meal from the stomach to the rectum, and even visualizes the filling and emptying of the gall bladder with bile.

The inspection of the modern laboratory is impressive to the visitor. The rows of reagents, reagents and test tubes; the microscopes, centrifuges and microtomes; the refrigerators, incubators and culture media; the polariscopes, hematocytometers, sphygmomanometers and other instruments of precision make a layman, and even some of the profession, think that the work done and the final report made must settle all questions in a given case.

But the laboratory method of diagnosis entails a loss as well as a gain, and has its dangers and disadvantages. While it is true that chemical reactions are always constant, that the microscopic field shows the cellular structure of tissue and the physical form of bacteria, and that the x-ray picture truly depicts the shadow of the object between the Crooke's tube and the photographic plate, it must always be remembered that there is a personal and uncertain factor in the result, namely, the laboratory man who construes what he sees. A poor pathologist or roentgenologist is worse than none at all, and even the opinion of the most experienced and proficient is occasionally wrong.

As valuable as are his services, the laboratory man

is sometimes too highly regarded. Seated upon his kingly stool and surrounded by a rarefied scientific atmosphere, he tends to tyrannize the clinician. His reports are too often accepted as final in their decrees and become enervating in their influence. Owing to a tendency to lean too much on laboratory reports, case histories and bedside records, the profession is in danger of neglecting the examination of the patient. Sick people are just as instructive today as in the time of Sydenham, Addison, and Bright. Laboratory data and clinical findings must be studied together. They must be compared, and one used to check a possible error of the other.

The hospital, while an old institution, is modern in its distribution and function. It has lived down its stigma of a death house. It has overcome the prejudices of the masses and appealed to the pride of the classes. Practically every town of 5000 inhabitants has a hospital, and every well-regulated hospital is an asset to its community. A hospital is now accepted as the safest, most comfortable and most economical place for the seriously sick, and it is also recognized as a local center for the dissemination of knowledge among the public, the training and education of nurses, and the uplift of the profession by the demands made for good records, thorough examinations, accurate diagnoses, and rational treatment.

The modern hospital, however, is not without its dangers and disadvantages, as it offers opportunity and hence temptation to members of its staff, especially those with surgical ambition, to undertake work for which they are not qualified. The following is a familiar illustration: A small town feels the need of a hospital. The women organize, raise the money and build one. The people of this community had formerly made it a practice to go to some neighboring city when in need of special medical treatment or a serious surgical operation. They are now urged to patronize the home hospital, and as that course appeals to their desire to help a local institution, and also avoids separation from family and friends, the advice is often followed. For a time an experienced surgeon is sent for to operate on difficult cases, and one of the local practitioners acts as his assistant. The successful result which usually follows in these early cases inspires the community with confidence in the hospital, and in time creates a desire in the mind of the local man to do the work himself. He spends six weeks or three months at a postgraduate school, and returns with a highly embellished certificate. He performs a herniotomy or removes an appendix and the patient does not die. He comes to be known in the community as a man of wonderful nerve. He hopes later to drop his other work and do nothing but surgery.

The evil goes further. This newly developed surgeon has no regular assistant, and makes it a rule to get the family doctor of the patient to help him with the operation. As the physician does part of the work it seems only proper that he should get part of the fee. When this practitioner has a patient who desires to go to a specialist in a large city, what is more natural than that he should go with him, and explain that he was reluctant to come be-

cause of the loss of the financial benefit he was accustomed to receive from such cases at home; or what more human than for the city surgeon to endeavor to meet this competition by offering to split the fee in this and future cases provided it was made sufficiently large; and what more necessary than that this secret understanding between the two be kept from the knowledge of the patient. And so has come about the great modern evil of the secret division of the fee, a practice by which the doctor sells the patient to the highest bidder, and by which the surgeon robs the patient to pay the doctor.

The evil of incompetency in the shape of the unqualified surgeon, and the vice of dishonesty in the form of the secret division of the fee, are being fought in the profession by the American College of Surgeons and other organizations. If the remedy is not found, action will be taken sooner or later by an indignant public through state legislation.

The advent of the trained nurse marked the epoch in medicine almost equal to the introduction of anesthesia and antiseptics, and the name of the founder of the order, Florence Nightingale, deserves to rank with those of Long, Pasteur, and Lister. The rapid and general adoption of the trained nurse was due not only to the professional needs of the doctor, but also to the domestic necessities of the public. In times past a sick person was nursed by servants and relatives. In every family there were old mammies and old maids who had considerable practical experience in nursing, and who derived a certain morbid pleasure from the temporary authority of the sick room. The modern servant problem, and the recent migration of the unmarried female members of the family from the home to the office, did away with the supply of amateur nurses and created a demand for the professional nurse.

At one time there were but two respectable things for a young woman to do, get married or teach school. Now many avenues are open to them, and of these none is more attractive or offers greater opportunities for service than the field of nursing.

Time will not permit an attempt to show the contributions of the trained nurse to the progress of medicine. In every department she has proved a faithful, efficient and trusted worker, without whose aid the end attained could not have been accomplished. At the bedside of the patient in the silent vigils of the night, in the operating room during the stress and strain of nerve-racking ordeals, and recently in Europe on battlefields torn with shell and red with carnage, she has shown a courage, a fixity of purpose and a devotion to duty rarely equaled in either sex or in any profession.

The nurse is a woman and therefore has her faults, but the faults are those of a woman, not of the nurse. If she is sometimes spoiled, occasionally a trifle tyrannical, and more rarely a bit supercilious from real or supposed superiority of knowledge, it shows the weakness of her sex and not of her profession. If her services are sometimes prostituted to

pamper the whims of the neurasthenic invalid, or to indulge the selfish indolence of the idle rich, it is not her fault but the fault of our present system of living.

The medical society is an important factor in the progress and development of medicine. While some members of the profession do not appreciate the advantages to be derived from regular attendance and active cooperation in medical organizations, it is a fact that the busy and successful practitioners are usually present at all the meetings of their county, state, and national associations. This can only be explained by the fact that those of the profession whose experience and judgment have proved to be the soundest believe that medical meetings are profitable.

Medical societies usually hold their regular sessions in different cities, and their meetings educate and stimulate the local profession, and advertise to the laity the fact that medicine is not bound by dicta and dogmas, but is a progressive science ready to discard the old if it is proved to be fallacious, and to adopt the new if it is found to be of value. The meeting of a medical society enables its members to read papers, thus giving them a legitimate opportunity to show their capacity; and to present new and original views as to the treatment of disease, thus adding to the knowledge of the profession. It enables its members to hear papers read by others, thus giving them an opportunity to gain an amount of information they could get in no other way with so little labor and in so short a length of time. The discussions that follow these papers are especially profitable. In them is an impressive personal element that is totally lost in the stenographic report published in the transactions.

In addition to the educational and professional advantages derived from these meetings there are the equally important social and personal benefits. The occasion is a holiday, a recreation, a vacation. It breaks the monotony of life and enables a man to do better work when he returns home. It offers the opportunity to meet men who are doing the same kind of work in different sections of the country, and results in pleasing and profitable acquaintanceships which often lead to permanent friendships. And last but not least, it brings together men who live in the same community but who, owing to petty jealousies or lack of time for social intercourse, see little of each other. Either in the session of the society, or in the committee room, or on the journey to and from the place of meeting, they are thrown into an intimate contact which frequently leads to explanation of misunderstandings, adjustment of differences, appreciation of good qualities, and to the establishment of the most friendly and cordial relations.

Despite the manifest and manifold benefits of the medical society, it is necessary from the profit to deduct a loss. There are many medical societies which have no right of being, and have been organized simply for political or personal motives. Originally established to give office or secure patronage

for a certain group of men, they are often supported for years through a mistaken pride or patriotism on the part of their members, to the great injury of the legitimate societies whose territories they cover. There is need for a movement to standardize medical associations, and until this is done through the proper channel the profession should try to minimize the evil by withdrawing its membership from superfluous organizations.

Twenty years ago it was considered derogatory to the dignity of one clinician to visit the workshop of another. To do so would be to invite the criticism of a confessed inferiority, or of a desire to spy on the work of a competitor. Then all one practitioner knew of the work of the other was through printed matter, and some things that were true were not believed and some things that were not true were accepted. It has now become almost a custom for a busy surgeon and physician to devote two or three weeks of the period previously assigned for a vacation to the duty of seeing, at first hand, what his fellows are doing. At the various recognized medical centers every provision is made for the convenience and instruction of visiting doctors. No fees are charged and the veriest stranger is made to feel welcome. By actually observing the methods practiced in these various clinics the visitor is able to decide whether or not they are preferable to the technique he had hitherto employed.

Surgeons as a rule attend clinics more frequently than do physicians. This is a pity, for even in a strictly surgical clinic the points of greatest interest are not the methods of operating, but the explanation of symptoms by the pathological conditions found. It is a curious fact that many physicians who would travel miles to see a post-mortem examination will not go around the corner to witness an operation which demonstrates the same changes produced by disease in living tissues before they are obscured by terminal results. To correct the loss entailed by the failure of the average physician to avail himself fully of the advantages offered by the modern clinic the internist must learn that to keep abreast of the times it is necessary not only to study but to travel as well.

Time will not permit a record here of the victories that have been achieved in preventive medicines, beginning with smallpox and now approaching a successful issue in the case of yellow fever, malaria, typhoid, and other diseases. The completion of the Panama Canal, a task rendered possible only by the sanitary regulation promulgated and enforced by Surgeon-General Gorgas, stands as an unquestioned tribute and enduring monument to the perfection and efficiency of the measures which modern science has developed for the maintenance of health and the prevention of disease.

The Public Health Service is now recognized as one of the most important departments of our general and local government. The work in this service offers the present-day graduate one of the most attractive fields open to him. It does not hold out the promise of fortune that goes with rare eminence

in private practice, but it guarantees to every worker a reasonable income, the opportunity for scientific study and research, the certainty of performing a useful service for his community, and the possibility of becoming a great benefactor to the human race.

Public health work marked the beginning of a new era in the relations between the profession and the public. It was characterized by an effort on the part of the profession to take the public into its confidence. Its purpose was to make the people a partner in the conservation of health. A short time ago if a doctor addressed a lay audience on a medical subject his motives were questioned. Now the profession employs every agency of publicity to spread the propaganda against disease. The columns of the newspapers and magazines, the walls of public conveyances, the lecture platform, the pulpit, the school, and the drama, warn and plead against the danger of the mosquito and house fly, the communicability of tuberculosis, the insidiousness of cancer, and the pathos of "Damaged Goods."

Publicity in medical matters has undoubtedly done good, but it has also done harm, and here as elsewhere we must record not only the profit but the loss.

The first loss is seen in the schools, for an examination of the textbooks employed in physiology and hygiene will show that just as at one time our children were taught false history, so now they are often taught false science. Another evil is the attempt to teach sex hygiene. It is a difficult question to decide in an individual case when and how to impart this delicate information. If parents hesitate to discuss the matter with their child at home, it is certainly an evasion of responsibility attended by great danger to turn the subject over to an old-maid teacher to deal with in a mixed school.

Finally, while ignorance is not innocence, the general information given the laity on medical subjects has caused a loss of one of those indefinite charms formerly possessed by women. Matters are now discussed in a mixed audience with a freedom and frankness that would have been thought unbelievable a generation ago. Beginning with co-education and equal suffrage, subjects suggestive of sex differences, the field of activity of the female mind has broadened, until now the average high-school girl is more or less familiar with the problems embraced under the terms eugenics, race suicide, the social evil, the age of consent, the white slave traffic, and the regulation of the red light district.

The woman of today has lost her prudery. Let her beware lest she lose her modesty as well! If such should prove the case it would be necessary to change from the credit to the debit side the balance now found in the "Profit and Loss Account of Modern Medicine."

NOTE: The paper by J. Edward Harbinson, M. D., and John D. Lawson, M. D., of Woodland Clinic on the "Treatment of Erysipelas by Roentgen Ray," published in the April, 1927, issue of CALIFORNIA AND WESTERN MEDICINE, was read before the California Northern District Medical Society on May 27, 1926.

THE DIAGNOSIS OF DRUNKENNESS—A QUANTITATIVE STUDY OF ACUTE ALCOHOLIC INTOXICATION*

By EMIL BOGEN, M. D.
Los Angeles

THE tremendous increase of automotive traffic, with its greater speed and consequent greatly increased possibilities for serious accidents, and the difficulties incident to the enforcement of the laws arising out of the prohibition amendment to the Constitution have thrown upon the physician many more problems and increased responsibilities in connection with the diagnosis of acute alcoholic intoxication and the determination of the degree of inebriety and its relationship to subsequent acts of the individual. The multitude of other pathological conditions, moreover, which may be either masked or mimicked by the symptoms of drunkenness, emphasize to the conscientious doctor the importance of properly evaluating this factor in the examination of his patients.

The recognition of acute alcoholic intoxication may appear to present few difficulties to the untrained mind. The odor of alcohol, dilated pupils, flushed face, red nose, muscular incoordination affecting the legs, arms, and the organs of speech, with consequent staggering, swaying, reeling, groping and shaking, with slurred, confused or thick speech, alterations in behavior, with removal of normal inhibitions, garrulousness, euphoria, boisterousness, pugnacity, sluggishness, even stupor or actual coma, are commonly recognized features of this condition, which are readily discernible.

But a person may be under the influence of alcohol to an extent that seriously affects his powers and behavior, especially in such a responsible situation as driving an automobile, without presenting the entire common syndrome of drunkenness. On the other hand, not a few of the symptoms of this condition may be simulated by other conditions besides acute alcoholism. Besides those individuals who naturally exhibit some of the characteristics associated with alcoholic intoxication, or who have some congenital or acquired defect which results in such manifestations, as in many cases of vasomotor instability where dilated pupils and flushed face are constant findings, or instances of tongue-tie or stuttering and stammering, or of constitutional psychopathic inferiority with behavior peculiarities, there are a large number of pathological conditions which may produce such symptoms. Thus any acute febrile disturbance, thyrotoxicosis, or hypoglycemia resulting from insulinism, with dilated pupils, tremors, flushed face, etc., and any number of local conditions affecting the eyes, nose, or the limbs, may produce symptoms similar to acute alcoholism. So also may the lesions of the central nervous system, such as skull fracture or intracranial hemorrhage following an accident, syphilis of the brain or cord, as locomotor ataxia or paresis, multiple sclerosis,

brain tumor, Friedreich's ataxia, pernicious anemia with cord changes, early meningitis, etc.

Under the circumstances that generally prevail at the time of the usual examination for intoxication, following an accident, shock or arrest, confusing functional disturbances are apt to occur. Of course, the differentiation between all of these conditions and acute alcoholic intoxication may be readily made in the majority of instances by the absence or presence of other signs or symptoms essential for the diagnosis, but this is not always the case, and it must not be forgotten that a man suffering from one of these other conditions may, and frequently does, also suffer from the effects of drinking alcoholic liquors.

The odor of ethyl alcohol is so distinctive and marked that most people can readily identify it on the breath of a person who has recently indulged. Little argument is required, however, that the odor of alcohol is not in itself sufficient to make a diagnosis of alcoholism, since a small quantity of alcohol, far too small to have any physiological effects of the magnitude which would justify such a diagnosis, might still be amply sufficient to cause a recognizable odor around the mouth and breath of the patient. The remarkably widespread use and availability of alcoholic beverages make it difficult to state just what was the relationship between the alcohol imbibed and the symptoms, or even whether it had been absorbed at all, or simply thrust between the lips of an unconscious patient, as sometimes occurs following fainting or accidents. On the other hand, the presence of other strong odors, as every toper knows, may effectually hide or disguise the odor of liquor; thus garlic, any of the essential oils, as cloves, filthy mouth conditions or pyorrhea with consequent halitosis, acidosis with acetone in the breath, uremia or an ammoniacal breath and many other conditions may make it impossible to rely upon this simple test.

Nevertheless accurate determination of the concentration of alcohol present in the tissues of the subject offers a possible means for ascertaining the degree of alcoholic intoxication. Numerous workers have reported that alcohol, like most other drugs, produces effects directly proportional to the amount of the substance in the tissues, and a number of observers have attempted to use the concentration of alcohol in the blood as an index to the psychological and physiological state of the patient. It has been shown that alcohol, taken by mouth, becomes quite uniformly distributed throughout the body very rapidly after it has been administered, reaching its maximum concentration in the blood usually within an hour. It then gradually lessens as the alcohol is oxidized in the body, which has been found to occur at the rate of about 10 grams per hour in the average human subject. Since the concentration of alcohol in the urine is usually equal or slightly greater than that in the blood, and the amount excreted through the expired air also bears a constant relationship to the concentration in the blood, the determination of the alcoholic content of these excretions may also be utilized for the purpose of evaluating the degree of alcoholization.

The present study is concerned with the correla-

* This paper was awarded the State Association Research Prize of one hundred and fifty dollars at the Fifty-Sixth Annual Session of the California Medical Association, April 25-28, 1927.

tion of the concentration of alcohol in the excretions with the data secured by careful clinical examination of the first one hundred persons suspected of alcoholism brought to the Los Angeles General Hospital during the latter half of the year 1926 for whom such information was available. The examination usually included the following:

1. Direct question as to quantity and variety of liquor imbibed and time since the last drink.
2. If odor of alcohol is perceptible when patient exhales deeply.
3. Size of the pupils.
4. If patient's face appears flushed.
5. If patient staggers or reels when he tries to walk unassisted across hallway.
6. If patient can stand with feet together and eyes closed without swaying. (Romberg test.)
7. If patient can touch tip of nose with outstretched forefinger with eyes closed. (Coordination test.)
8. If patient can speak clearly, without slurring or mixing up syllables. (Test phrase "Methodist Episcopal" was often used.)
9. If any aberration of conduct or behavior were noted, especially garrulousness, boisterousness or pugnacity.
10. If there was any complicating injury or disease present.
11. Any other information which might be of value.
12. A specimen of urine was obtained on admission and placed in a sealed test tube on ice until examined for alcoholic content. A sample of expired air was taken in a football, and immediately tested for alcoholic content.

The methods used for the determination of alcohol in this study were devised and adapted particularly for this purpose, and numerous checks and control tests performed to insure accuracy and reliability. For determining the concentration of alcohol in the breath the patient was asked to blow up a football having a capacity of about 2000 cc. This air, while still warm, was then bubbled at a

moderate rate through 5 cc. of a hot solution of 0.33 per cent (N/15) potassium dichromate in 50 per cent concentrated sulphuric acid. The color change, from reddish yellow to greenish blue, was then measured by comparison with a series of standards previously made up by the addition of known amounts of alcohol (1, 2, 3, 4, and 5 milligrams) to 5 cc. of the reagent and sealed.

For determining the concentration of alcohol in the urine, blood or spinal fluid, 1 cc. of the unknown solution (or $\frac{1}{2}$ cc. in some cases) was placed in a test tube and a purified current of air was bubbled through this tube and then passed through 5 cc. of the potassium dichromate sulphuric acid mixture as used above for ten minutes, both tubes being immersed in a boiling-water bath. In these tests, in addition to noting the color change by comparison with known standards, as above, the amount of reduction due to the alcohol was determined more accurately by titrating with a solution of N/30 ferrous ammonium sulphate in 5 per cent sulphuric acid, using three drops of a 1 per cent solution of potassium ferricyanide as an indicator, until the deep blue color was obtained. Each 2 cc. of the ferrous ammonium sulphate solution less than 10 cc. required for this titration represented 1 milligram of alcohol in the unknown solution when 1 cc. of the urine, blood or spinal fluid, etc., was used. When acetone was present in the unknown solution, it was removed by the addition of 1 cc. of Scott Wilson's reagent before aeration.

The results of these examinations are presented in Table I. Nearly one-half of the one hundred patients in this series were kept in the hospital for treatment. In twenty-nine instances this was done because the patient was so deeply intoxicated as to be unable to stand up, and so had to be cared for until he was able to leave. In most of the other seventeen, complicating conditions such as fractures, severe wounds or lacerations, or poisoning were present. The proverbial drunkard's luck did not appear to be much in evidence, since nearly half of the patients here examined, and a greater percentage

TABLE I
CLINICAL FINDINGS IN ONE HUNDRED PATIENTS SUSPECTED OF ALCOHOLISM
Classified According to the Alcoholic Content of the Urine

Mg. alcohol per cc. urine.....	0-1	1-2	2-3	3-4	4-5	5-	Total
Patients examined.....	7	11	26	37	13	6	100
Kept in hospital.....	3	3	10	16	8	6	46
Diagnosed acute alcoholism.....	0	6	16	29	13	6	70
"Has been drinking".....	1	0	3	8	0	0	12
Insufficient evidence.....	6	5	7	0	0	0	18
Complications present.....	5	4	10	19	8	1	47
Age: Under 30 years.....	2	9	6	6	1	1	25
30 to 40 years.....	2	1	9	11	3	1	27
Over 40 years.....	0	1	4	8	5	2	20
Admit drinking.....	3	5	9	17	6	3	43
Odor of alcohol.....	3	9	21	37	13	6	88
Flushed face.....	0	3	15	16	4	2	30
Dilated pupils.....	0	2	8	16	3	1	30
Unable to walk straight.....	0	4	12	26	13	6	61
Unable to stand at all.....	0	0	5	10	8	6	29
Sway on standing (Romberg).....	1	2	14	25	5	0	47
Incoordination (marked).....	0	1	7	18	9	4	39
Behavior disturbances.....	0	2	12	24	8	0	46
Speech slurred.....	1	1	4	5	4	0	15
Speech confused.....	0	6	10	8	7	0	31
Speech, unable to talk.....	0	2	5	3	2	6	18
Comatose.....	0	0	3	7	5	6	21

TABLE II
INCIDENCE OF SYMPTOMS AT DIFFERENT CONCENTRATIONS OF ALCOHOL
Expressed as Percentage Present in Each Group

Mg. alcohol per cc. urine.....	0-1	1-2	2-3	3-4	4-5	5-	Total
Actual number of patients.....	7	11	26	37	13	6	100
Expressed as percentage.....	100	100	100	100	100	100	100
Per cent kept in hospital.....	43	28	40	43	64	100	46
Per cent diagnosed acute alcoholism.....	0	54	62	80	100	100	70
Per cent admit drinking.....	43	55	33	46	48	50	43
Per cent odor of alcohol.....	43	82	81	100	100	100	83
Per cent flushed face.....	0	27	20	43	32	33	30
Per cent dilated pupils.....	0	18	30	43	24	16	30
Per cent staggering gait.....	0	36	27	43	40	0	42
Per cent cannot stand.....	0	0	20	27	60	100	29
Per cent positive Romberg sign.....	14	18	52	72	100	100	47
Per cent incoordination.....	0	9	27	52	82	66	39
Per cent behavior disturbances.....	0	18	46	15	16	0	46
Per cent speech slurred.....	14	9	15	13	30	0	15
Per cent confused.....	0	54	38	21	53	0	31
Per cent unable to talk.....	0	18	19	8	15	100	18
Per cent comatose.....	0	0	11	20	40	100	21

of those found to be actually intoxicated, were suffering from some such complicating condition.

The relationship of the concentration of alcohol in the urine to the degree of intoxication of the subject is strikingly brought out in this table. None of the patients with less than 1 milligram of alcohol per cc. of urine were found to be intoxicated, a little more than half of those having from 1 to 2 milligrams per cc. were so diagnosed, nearly three-fourths of those having from 2 to 4 milligrams and every individual having 4 milligrams or more per cc. of urine were so pronounced. These diagnoses were naturally very conservatively made, since the receiving physician was called to court to sustain his impression in many cases, and unmistakable clinical evidence was insisted upon for this purpose.

Even more striking is the relationship between the concentration of alcohol in the urine and the different symptoms usually considered indicative of acute alcoholism. The odor of alcohol was present in less than half of those showing under 1 milligram of alcohol per cc. urine, in more than three-fourths of those showing from 1 to 3 milligrams, and in every instance where the urine contained

3 milligrams or more of alcohol per cc. On the other hand, the dilated pupils and flushed face, so frequently called on as evidence, were found in less than one-third of these cases, and were particularly noted in the moderate groups, being replaced by constricted pupils and pallor in a high proportion of those coming in in coma, or stuporous.

The inability to stand straight without swaying is generally accepted as a characteristic symptom of acute alcoholism. More than three-fourths of the patients in this series showed this sign, of whom twenty-nine, as noted above, were unable to stand at all. The swaying was noted in less than 20 per cent of those showing under 2 milligrams of alcohol in the urine, but in more than 80 per cent of the others who were able to stand at all. In no case with 3 milligrams or more was the subject able to stand without swaying. Marked incoordination of the hands was recorded in thirty-nine cases, and was most frequently found in those who had more than 3 milligrams per cc. Behavior disturbances, on the other hand, including garrulousness, volubility, euphoria, boisterousness or pugnacity was more pronounced in those showing from 2 to 4 milligrams,

TABLE III
INCIDENCE OF SYMPTOMS AT DIFFERENT CONCENTRATIONS OF ALCOHOL
Expressed as Percentage Present of Those Showing That Symptom

Mg. alcohol per cc. urine.....	0-1	1-2	2-3	3-4	4-5	5-	Total
Per cent actual number of patients.....	7	11	26	37	13	6	100
Per cent kept in hospital.....	7	7	22	34	17	13	100
Per cent diagnosed acute alcoholism.....	0	8	23	43	18	8	100
Per cent insufficient evidence.....	33	28	39	0	0	0	100
Per cent under 30 years of age.....	8	36	24	24	4	4	100
Per cent 30 to 40 years of age.....	7	4	33	41	11	4	100
Per cent over 40 years of age.....	0	5	20	40	25	10	100
Per cent admit drinking.....	7	12	21	39	14	7	100
Per cent odor of alcohol.....	3	10	23	42	15	7	100
Per cent flushed face.....	0	10	17	52	13	8	100
Per cent dilated pupils.....	0	8	27	52	10	3	100
Per cent unable to stand up.....	0	0	17	35	28	20	100
Per cent staggering gait.....	0	12	22	50	16	0	100
Per cent positive Romberg sign.....	2	4	30	53	11	0	100
Per cent incoordination.....	0	2	16	48	28	8	100
Per cent behavior disturbances.....	0	4	26	53	17	0	100
Per cent speech disturbance.....	1	14	31	25	20	9	100
Per cent comatose.....	0	0	14	33	24	29	100

TABLE IV
CONCENTRATION OF ALCOHOL IN THE BREATH AS AN INDEX TO INTOXICATION

Mg. alcohol per 2 liters breath.....	0-1	1-2	2-3	3-4	4-	Total
Diagnosed alcoholic intoxication.....	2	12	12	7	2	35
Insufficient evidence.....	9	3	3	0	0	15
Total.....	11	15	15	7	2	50

as above that they tended to lapse into sluggishness, stupor or coma.

Speech disturbances varied from a slight slurring or thickening of speech, or a sluggishness or spacing of syllables to confusion, verbigeration, and eventually inability to enunciate at all. Two out of every three patients examined showed some defect in ability to speak, but this, of course, varied considerably according to the ability and previous experience of the individual, being more marked in some patients with lower concentrations of alcohol than in others who had a much higher figure.

It is interesting to note that the age distribution in the different groups varied with the concentration of alcohol in the urine, being lowest in those with low concentrations and highest in those who had the highest concentrations. This is believed, from personal acquaintance with the material at hand, to be related to differences in social and individual factors, such as the prevalence of solitary drinking among the aged, etc., rather than to increased tolerance or higher metabolic activity among the younger men. Of course in this series the subjects were mainly men, but a few women were included. A number of negroes were also included, although most of the patients were white.

The relative proportions of the different groups showing each symptom is presented in Table II, and the proportion of those showing that symptom in each group is shown in Table III.

The question of tolerance to alcohol is, of course, of paramount importance in a study of this kind. That some individuals are able to drink many times the amount of alcohol as others is a matter of common information. There are, of course, three possible explanations for this phenomenon. Delayed absorption of the alcohol is probably an important factor, as Hanzlik showed in animal experiments, and this is suggested in the curves for alcohol concentration in the blood of certain of our patients, where the peak for habitues came later than that for those with lower tolerance. That the rate of oxidation of alcohol may be increased in persons habituated to the drug is very plausible, and is suggested by some of the figures presented by Higgins

and Miles, on the combustion of alcohol as shown in the respiratory quotient, although Mellanby reported that the amount of alcohol utilized in the body does not vary greatly in different individuals. The third possibility, that the tissues may become resistant to higher concentrations of alcohol, would preclude the acceptance of the concentration of alcohol as an index to the degree of intoxication. Experimental evidence on this point is not yet conclusive, but the uniformity of the results presented in Tables I, II, III, IV, and VI are convincing, for this series at least, that this cannot be taken as occurring to any great extent. In other words, it appears that the development of tolerance to alcohol consists in greatly retarded absorption, and perhaps in increased rate of oxidation of the alcohol, but that the tissues are always affected to about the same degree by the same concentration of alcohol in the body, independent of the habituation of the individual.

The concentration of alcohol in the urine cannot be taken as an absolute indication of the alcoholic concentration in the patient's tissues because of lack of information as to the time period during which that urine had been secreted, as it would, on the whole, represent the summation of all of the different concentration existing during the period of secretion, although the work of Nicloux indicates that there may be some resorption of alcohol from the bladder if the concentration in the urine becomes much higher than that in the blood. Southgate and Carter met this objection by having the patient void on admission and again fifteen minutes later, and taking the latter sample as representing the condition of the patient at this time. We have had some difficulty in obtaining specimens of urine, as catheterization is not always justified in such cases, and there is often insufficient time for further procedures, and so have looked for some simpler method of making this determination.

The concentration of alcohol in the breath, as shown in Tables IV and Table V, offers a very attractive-looking substitute. As soon as the disturbing factor of the alcoholic liquor still in the mouth and lips is removed, the concentration of

TABLE V
CONCENTRATION OF ALCOHOL IN THE BREATH COMPARED WITH THAT IN THE URINE

Mg. alcohol per 2 liters, breath.....	0-1	1-2	2-3	3-4	4-	Total
Mg. alcohol per 1 cc., urine						
0-1.....	1	1	4	0	0	6
1-2.....	1	2	4	4	0	11
2-3.....	0	1	4	3	0	8
3-4.....	0	0	4	3	0	7
4-.....	0	0	1	1	1	3
Total.....	2	4	17	11	1	35

TABLE VI
CONCENTRATION OF ALCOHOL IN THE SPINAL FLUID COMPARED WITH THAT IN THE URINE

Mg. alcohol per cc. spinal fluid.....	0-1	1-2	2-3	3-4	4-5	5-	Total
Mg. alcohol per cc. urine	0-1	0	0	0	0	0	0
1-2.....	0	0	0	0	0	0	0
2-3.....	0	0	1	1	0	0	2
3-4.....	0	0	0	0	0	0	0
4-5.....	0	0	0	0	3	1	4
5-.....	0	0	0	0	1	3	4
Total.....*	0	0	1	1	4	4	10

alcohol in the breath approaches a fairly constant relationship to that in the blood, since it passes through the lungs very easily. As may be seen in Table IV, less than 20 per cent of patients having less than 1 milligram of alcohol in the sample of breath taken were found to be intoxicated, as compared to 80 per cent of those having from 1 to 3 milligrams and 100 per cent of those having 3 milligrams or more. Table V shows how the breath alcoholic concentration keeps pace with that in the urine, although, as may be expected from the considerations given above, it could not be expected to give a perfect check.

The concentration of alcohol in the spinal fluid was determined in ten instances. In eight cases where the urinary alcoholic concentration was more than 4 milligrams per cc., the spinal fluid also contained more than 4 milligrams per cc. as shown in Table VI. In the other two cases, where the urinary alcoholic concentration was between 2 and 3 milligrams, the spinal fluid contained 2 milligrams per cc. in one case and 3 milligrams per cc. in the other. The concentration of alcohol in the blood was also determined in fifteen instances, but it was found that in the blood the alcohol was destroyed on standing so rapidly that the determinations gave much too low figures except in those cases where this determination could be done within a very short time after the blood was taken, as shown in Table VII.

In view of the difficulty in making the diagnosis of acute alcoholic intoxication from the clinical evidence alone, as may be confirmed from a review of the data in the cases above presented, and in view of the constancy of the findings as to the concentration of alcohol in the urine and in the breath with reference to the degree of alcoholic intoxication, it is concluded that the examination of patients to determine the state of intoxication should in every case include some quantitative determination of the amount of alcohol present in the urine, breath, or body fluids. It is not expected that such test should

supersede and entirely replace all of the other clinical evidence presented, but, as any laboratory test, it must be interpreted in the light of the findings in the individual case. A study of the results in the series of cases just analyzed, however, as well as those reported by many other observers, notably Nicloux, Widmark, Schweisheimer, Miles, Mellanby, Southgate and Carter, and many others, leads us to rely upon the alcoholic concentration in the urine, breath or tissues as the most important single factor in arriving at a correct conclusion as to the degree of intoxication of a patient.

REFERENCES

- Abderhalden, E.: *Bibliographie der gesamten wissenschaftlichen Literatur ueber den Alkohol*. Berlin, 1904.
 Abel, J. J.: *A Critical Review of the Pharmacological Action of Ethyl Alcohol in Physiological Aspects of the Liquor Problem*. Boston, 1902, II, 1.
 Anstie, F. E.: *On the Prognosis and Treatment of Certain Acute Diseases*, *Lancet*, 1867, II, 189 and 385.
 Anstie, F. E.: *Final Experiments on the Elimination of Alcohol From the Body*, *Practitioner*, London, XIII, 15.
 Atwater and Benedict: *An Experimental Inquiry Regarding the Nutritive Value of Alcohol*, *Mem. Nat. Acad. Sci.*, 1902.
 Benedict and Dodge: *... the Psychological Action of Ethyl Alcohol*, Boston, 1913.
 Benedict and Norris: *Journal of the Am. Chem. Society*, 1898, XX, 293.
 Billings, J. S.: *Physiological Aspects of the Liquor Problem*, 1913.
 Bodlander: *Die Ausscheidung aufgenommenen Wein-gerstes aus dem Korper*, *Pflugers Archives*, XXXII, 398, 1883.
 Biehler: *Blutkonzentration Ausscheidung des Alkohols im Hochgebirge*, *Arch. f. Exp. Path. und Pharm.*, 1925, CVII, 20.
 Carpenter, T.: *Physiological Effects of Ethyl Alcohol When Injected into the Rectum*, *Am. J. of Physiol.*, 1917, XLII, 605.
 Carpenter and Babcock: *Absorption of Alcohol and Its Concentration in the Urine When Injected by Rectum*, *J. Biol. Chem.*, 1917, XXIX, p. 27.
 Carpenter and Babcock: *The Concentration of Alcohol in*

TABLE VII
CONCENTRATION OF ALCOHOL IN THE BLOOD COMPARED WITH THAT IN THE URINE

Mg. alcohol per cc. blood.....	0-1	1-2	2-3	3-4	4-5	5-	Total
Mg. alcohol per cc. urine	0-1	0	0	0	0	0	1
1-2.....	0	0	0	0	0	0	0
2-3.....	2	1	0	1	0	0	4
3-4.....	0	2	0	0	1	0	3
4-5.....	1	1	2	0	0	1	5
5-.....	1	0	0	0	1	0	2
Total.....	5	4	2	1	2	1	15

- the Tissues of Hens After Inhalation, *Am. J. of Physiol.*, 1919, XLIX, 128.
- Cotte: *Rep. Pharm. Bd.*, IX, 438.
- Gettler, A. O., and Tiber: *Archives of Pathology*, I, 1927.
- Cannan and Sulzer: *Heart*, XI, 1924, p. 148.
- Dox and Lamb: *Determination of Alcohol*, *J. Am. Chem. Soc.*, 1916, XXXVIII, 2561.
- Dupre: *On the Elimination of Alcohol*, *Practitioner*, 1872, VIII, p. 149.
- Forbes, John: *The Physiological Effects of Alcoholic Drinks*, 1848.
- Fisk, E. L.: *Alcohol and Human Efficiency*, *Atlantic Monthly*, 119, p. 43.
- Fisk, E. L.: *Alcohol*, New York, 1917.
- Grehant: *Compt. Rend. Soc. de Biol.*, 1899, LI, pp. 808 and 946; 1900, LII, p. 894; 1903, LV, pp. 225, 376, 802; 1903, LV, p. 1264.
- Gyllensward: *Skandinavisches Archiv. f. Physiologie*, 1918, p. 327.
- Hamill: *J. Physiol.*, XXXIX, 1910, p. 476.
- Horsley and Storge: *Alcohol and the Human Body*.
- Hanzlik: *J. Biol. Chem.*, 1912, XI, 61.
- Hanzlik and Collins: *J. Pharm. and Exp. Therapeutics*, 1913, V, 185.
- Higgins, Harold L.: *Determination of Acetone in the Breath*, *Johns Hopkins Hosp. Bull.*, XXXI, No. 358, December, 1920; *Alcohol in Barker's Endocrinology and Metabolism*; *Rapidity With Which Alcohol and Some Sugars may Serve as Nutrient*, *Am. J. Physiol.*, XLI, No. 2, August, 1916; *Effect of Alcohol on the Respiration and the Gaseous Metabolism of Man*, *J. Pharm. and Exp. Therap.*, 1917, IX, p. 441. Higgins, Harold L., Peabody and Fitz: *A Study of Acidosis in Three Normal Subjects, With Incidental Observations on the Action of Alcohol*, *J. Med. Research*, 1916, 34, p. 263.
- Kionka u. Hirsch: *Untersuchungen ueber Alkohol I*, *Arch. f. Exp. Path. und Pharm.*, CIII, p. 282, 1924.
- Kuhn: *Untersuchungen ueber Alkohol II*, *Arch. f. Exp. Path. und Pharm.*, CIII, p. 295, 1924.
- Kraepelin, E.: *Ueber die Beeinflussung einfacher psychischer Vorgange durch einige Arzneimittel*, Jena, 1893.
- Mellanby: *Alcohol, Its Absorption into and Disappearance From the Blood Under Different Conditions*, *British Medical Research Committee Special Report*, Series No. 31, 1919, 1.
- Mellanby, E.: *British J. of Inebriety*, 1920, XVII, 157.
- Miles, W.: *Alcohol in Human Blood and Urine*, *J. of Pharm. and Exp. Therap.*, 1922, XX, 265; *Alcohol and Human Efficiency*, *Carnegie Institute*, Washington, Pub. No. 333, 1924; *Effect of Alcohol on Psychophysiological Function*, *Carnegie Institute*, Wash., Pub. No. 206, 1918.
- Mendel and Hilditch: *The Influence of Alcohol upon Nitrogenous Metabolism in Man and Animals*, *Am. J. Physiol.*, 1910, XXVII, p. 1.
- Mullikan: *Identification of Pure Organic Compounds*, Vol. 1, p. 168.
- Nieloux, Maurice: *Compt. rend. Soc. de Biol.*, 1899, LI, 980, 982; *ibid.* 1896, XLVIII, p. 841, 1126; *ibid.* 1900, LII, 295, 297, 980, 983, 622; *ibid.* 1903, LV, 282, 284, 391, 744, 1014, 1229; *ibid.* 1906, LX, 1034; *ibid.* 1913, LXXIV, 267; *ibid.* 1912, LXXII, 59, 63; *Zeitschrift f. Physiol. Chem.*, 1905, XLIII, 476. Nieloux, Maurice, and Nowicka: *J. de Physiol. et de Pathol. Generale*, 1913, XV, 297.
- Pringsheim: *Biochem. Zeitschr.*, 1908, XII, 143.
- Remund, M. H.: *Der Alkoholnachweis in der forensischen Praxis*, *Schweizerische Med. Wochenschrift*, No. 37, p. 909, September 18, 1926.
- Schwartz, Fritz: *The Determination of Ethyl Alcohol*, *Schweiz. Med. Wochenschrift*, No. 38, p. 923.
- Schweisheimer: *Der Alkoholgehalt des Blutes unter verschiedenen Bedingungen*, *Arch. f. Klin. Med.*, 1913, CIX, 271.
- Starling, E. H.: *The Action of Alcohol on Man*, London, 1923.
- Simmonds, Charles: *Alcohol*, ——— 1919, p. 160.
- Smith, J. Hall: *Experiments on the Chromic Acid Test*

- for Alcohol, *Brit. and F. Med. Chirur. Rev.*, 1861, XXVIII, 232.
- Southgate: *Biochem. Journal*, XIX, p. 737, 1925; *ibid.* XVIII, p. 101, 1924.
- Southgate and Carter: *British Med. Journal*, 1:463, March 13, 1926.
- Sulzer and Cannan: *Alcohol in Blood*, *Heart*, II, p. 141, 1924.
- Tigerstedt, Carl: *Effects of Alcohol in Weak Solutions*, *Pflugers Archives f. d. g. Physiologie*, CCV, 170, 1924.
- Stewart, James Purves: *Acute Drunkenness*, *Soc. for Study of Inebriety*, January 13, 1925.
- Widmark: *Biochem. Jour.*, 1920, XIV, 364.

ASSOCIATED FEES—MEDICAL AND SURGICAL *

By FRED R. FAIRCHILD, M. D.
Woodland Clinic

THE chairman of the General Surgery Section of this society is honored in the privilege of addressing you in formally opening the session. Inclination impels toward some subject of scientific interest, but the technical side of the program will be ably cared for by the gentlemen to follow. For this reason your presiding officer has chosen to use the time allotted him in discussing a matter of interest to every surgeon and one even more interesting to his confrères on the medical side. It is not a pleasant subject, this matter of fees. We like to think of ourselves as scientists devoting our lives to the betterment of the physical condition of our fellow-man. We believe ourselves to be all of this, but we should not fail to recognize the fact that economic factors will not be divorced from our profession until the remark of a famous Californian that "a man must eat" becomes untrue.

Let us then frankly consider the distasteful but nevertheless important financial side of our calling. And let it be understood at the outset that the purpose of this discussion is in the interest of honesty and fair dealing, to secure simple justice and full understanding between each of the concerned parties, namely, the patient, the referring physician, and the surgeon, while respecting strictly the dictum of our Code of Ethics as related to the division of fees.

The subject chosen, you will bear in mind, is "Associated Fees—Medical and Surgical." This limitation is made since it brings us directly to the discussion of a very real and as yet not satisfactorily solved problem in the practice of medicine and surgery. Until we find an answer the obnoxious subject of "fee-splitting" will be before us, and its general discussion can bring nothing but discredit to the profession. This subject was first introduced and the opprobrious name applied in an honest attempt to eradicate an unethical practice on the part of a comparatively few surgeons. Unfortunately the effect of the discussion has been to cast suspicion upon surgeons generally—upon a body of men whose unselfish devotion to duty and ethical standards are

* Chairman's address, Section on General Surgery, at the Fifty-Sixth Annual Session, California Medical Association, April 25-28, 1927.

such as to entitle them to commendation rather than to condemnation.

In an attempt to clarify the matter the following analysis of the conditions relating to fees is made.

Theoretically there should be no problem as to fees even in those cases where the internist and the surgeon have both a vital relation. Theoretically each has performed a service of value and each can present his bill and receive his pay directly from the patient. Practically this method does not function satisfactorily. This statement is made from an intimate knowledge of the experiences of many reputable men in our profession plus a personal observation over a number of years in general practice and of a greater number of years in work limited to surgery.

Why does not this simple, open and seemingly fair solution give satisfaction to all of those concerned, the patient, the referring physician, and the surgeon? The assumption is that all three are honest, for no rule can keep a crooked man straight, and this paper is addressed only to those who are seeking a fair solution of this problem. The answer to the above question is that it does not give satisfaction because the practical effect of the theoretical solution results generally in injustice to the referring physician. Any plan that is not just to all concerned is untenable.

Why does this theoretically ideal plan result in injustice to the referring physician? For two main reasons. The first is that, while the layman has been educated to understand and appreciate the value of a surgical service, he has not been taught to estimate the value of a medical service even though it may be equally vital as a factor in preserving health or life. The second is that surgery to the lay mind is dramatic and, therefore, an adequate surgical fee will be promptly and cheerfully paid, while in the same case a moderate fee for medical services will be questioned or repudiated.

To illustrate the practical results of this unfortunate and unjust condition, assume a typical example. A patient is ill and calls the family physician; several visits are made. Technical work and diagnostic acumen worthy of every consideration are brought into play. A correct diagnosis is made and an operation is found to be necessary. Then comes the exercise of much tact in convincing the patient and the family of the necessity for surgery. And do not underestimate the value of the possession of this ability, for without it the sufferer will be as unfortunately situated as though a wrong diagnosis had been made. The patient is taken to the hospital the surgeon concurs in the diagnosis and operates. Health is restored or a life is saved. Now, who will say that the surgeon has performed a service of greater value to the patient than has the physician, or that his technical skill is more worthy of reward than the competent generalship of his brother, the internist?

According to our ideal theoretical plan of managing fees each presents his bill. Without discussion you will probably visualize the surgeon's bill many times the amount of that which the physician would dare to present. Is this just? Your answer is: It

is not. Yet these are the conditions under which we are working.

It was stated that to the lay mind surgery is dramatic. For this reason the probabilities are that the surgeon's bill for services will be promptly paid. This you say is a fortunate thing for him, but what has it to do with injustice to the physician. Again assume a typical example. The patient is ill and calls the family physician who successfully performs all of the valuable functions above described. The surgeon likewise does his part in restoring health. Under our ideal theoretical plan bills are again presented, but this patient differs from the former in that his finances are limited. He has enough to pay his hospital fees and his nurses, with two or three hundred dollars over for the physician and the surgeon.

The physician's work antedates that of the surgeon. We have admitted its relative importance. Unfortunately the patient does not see the values clearly. The obligation of the physician is accumulated gradually, so much so, that with it the patient acquires an immunity to a sense of his financial responsibility. The work of the surgeon is prompt, impressive, and, in the mind of the invalid, the vital factor in his cure. The services of the physician are given in the patient's home by a man who often has no thought of immediate compensation. The services of the surgeon are rendered in the hospital by a man who has learned the wisdom of having some definite understanding in advance about the fee. Is there any question as to who will receive his compensation? If there is need for deferred payments, is there a question as to who will do the waiting? Again, is this just to the physician?

The above examples are not exaggerated. They are typical of the experiences of everyone of us. If this be true we must conclude that the plan suggested to us for the collection of fees is ideal only theoretically. It cannot, without further education of the public, be made to function practically.

At this point lest there be a question of our loyalty to the Code of Ethics in its relation to the division of fee, let me hasten to add that the principles set down are not only theoretically ideal but that they are practically and justly workable, providing the surgeon is fair enough to cooperate with the physician, and providing the right methods are used in their application.

Fees are probably secretly divided much more commonly than we like to admit. Sometimes the practice is the result of unquestionable dishonesty, the purpose being to buy the support of the referring physician and by an addition to the statement for services rendered to have the patient pay the purchase price. This paper is not concerned with such individuals. They are few. They cannot be controlled by ethics. More often the practice is the result of an honest desire on the part of a conscientious surgeon to see that his medical confrère has fair remuneration. He argues that it costs the patient no more, since he makes no added surgical charge, and he knows, for the reasons given above, that the physician will not be justly treated if he attempts to collect in the way that he theoretically

could and should (and practically cannot) by the presentation of his own bill.

But be the motive honest or dishonest the practice of secret division of fees is not defensible. It lays the unselfish and honest surgeon liable to suspicion. It forms a precedent which the unscrupulous surgeon will use for his own dishonest practices and affords him just the opportunity which he desires to deceive and fleece the patient. It leads the layman further astray in his already wrong conception of the relative value of medical and surgical services. He feels that he has paid the medical man justly, since he has paid the bill as presented. He does not know that the surgeon has contributed to make the compensation just.

This brings us to a point where we can make a plain statement of the purpose of this address. It is proposed that in all cases where an internist and a surgeon have cooperated that their fees should be associated, that is, that one statement should be rendered, the bill being so itemized as to show definitely the obligation to each man. By this method the physician would make charges commensurate with his services, these to include a just estimate of the value of his diagnosis and advice. Since the bill would be a joint one, the surgeon would assume an equal responsibility for those items which might seem to the patient, in his misconception of relative fee values, to be overcharges, and, since he would be assuming this responsibility, it would be incumbent on him to explain why the physician's charges were just and why they were quite as worthy of consideration as any work which he had done.

And this explanation is simple and to the patient educational. He should be made to understand that the so-called operative fee is in fact a fee which compensates for diagnosis, judgment, and for the operation. The surgeon in the case of an unREFERRED patient will fix a fee which in total compensates himself for all of these items of service. If one or two of these items of service have been performed by another, simple justice demands that the one who rendered the service should receive the reward. Nor should the patient be made this charge as an addition. It should be deducted from the statement of the surgeon, his bill having been rendered based on the assumption that he had performed all of the factors of the total service and being the same in amount as though the patient had come unREFERRED.

By this method the laity would soon become educated to a true conception of the relative values for medical and surgical attention. This plan would eliminate the present unjust situation which results in the surgeon alone receiving his fee where funds are insufficient for both. It would mean that both the physician and the surgeon would accept a proportionate discount on the value of their services where any reduction in bills was necessary. It would eliminate the excuse for secret money transactions and would acquaint the patient with every financial fact relative to his professional care. It would satisfy the honest physician, for it would secure for him as surely as for the surgeon the pay that he had justly earned. It should satisfy the honest surgeon—though it might pique the selfish one—for such a man would surely desire no unfair

advantage over his brother on the medical side. The plan should function to the great satisfaction of both internist and surgeon in that it would enable them to uphold the spirit and the letter of our Code of Ethics with the full consciousness that each was being strictly just to the other while both were equally fair to the patient.

PROGRESS IN PEDIATRICS*

By ANDREW J. THORNTON, M. D.
San Diego, California.

IF there is one branch of scientific medicine that is advancing more rapidly than another, I think that distinction may be claimed for pediatrics. Probably that feeling is shared by a large number of physicians in our specialty. We have a general sense that this is true, but when one begins to compile actual facts and figures to prove the statement the results are astonishing. Progress in any line of scientific endeavor is necessarily slow. We press forward day after day and year after year doing our job as best we can. We gather bits of newer thought as we go along the way and weave them into the fabric of everyday practice. It may be likened to the man climbing up the mountain slope. The ascent is gradual and he feels sure that he is gaining heights, but not until he stops to look back does he realize just how far he has actually progressed.

Just for a few minutes we shall view the last few turns in the road over which we have passed and note the changes. Let us start at the beginning.

Studies in nutrition have proved beyond question that prenatal influences must be reckoned with if the best results in child culture are to be realized. Some of the obstetricians are taking cognizance of these facts, and they are to be congratulated. Closer relations between the obstetrician and the pediatrician are gradually being developed, and the next generation will benefit greatly because of this cooperation. The responsibility imposed upon the doctor who practices obstetrics—great as it ever was—is today even heavier because of recent discoveries in the field of nutrition. Formerly the accoucheur was concerned only with the more severe forms of toxemia of pregnancy and the safe conduct of labor, but today he must know that errors in diet during pregnancy may be responsible for deficiencies in the child that no amount of after care and feeding by the pediatrician can correct. Much can be done for deficiencies that occur after birth, but for those errors in the mother's diet that affect the teeth and other structures of the child in utero no correction can be made. Any physician who cares for pregnant women should study assiduously the newer books on nutrition and apply the knowledge gained to the careful regulation of habits and food of their patients. Do it for the sake of the child, as the full significance of diet in the developing embryo is just becoming appreciated.

THE NEW-BORN

In the many problems of the new-born the obstetrician is again involved, and his cooperation is asked. Many of the progressive men are asking the assist-

* Chairman's address, Pediatric Section, at the Fifty-Sixth Annual Session of the California Medical Association, April 25-28, 1927.

ance of the pediatricist, realizing that it is here that the baby doctor's job begins and his responsibility ends. All over the country the younger men in pediatrics are taking advantage of every opportunity to see and study new-born babies, and the obstetricians are making this possible. Now that we are having better obstetrics let us have better care of the new-born. Let us learn to recognize promptly and how best to treat such conditions as hemorrhagic disease, hemorrhage into the ventricles of the brain, prematurity and many other exigencies of the first few days of life. When the general practitioner knows how to deal with these conditions we shall see in our offices fewer of those hopeless and distressing cases that every doctor dreads even to think about.

FEEDING AND NUTRITION

Thanks to Marriott, McCollum, Gerstenberger, and others the mystery has been taken out of the child's food. It no longer concerns us greatly if there is no available breast milk supply for a new-born infant. In fact we no longer admit that mothers' milk is necessarily superior to all other foods in all cases or that it is always the ideal food for babies. We realize, of course, that there is something to breast feeding *per se* besides the mere physical benefits to the baby. Many doctors believe that nursing at the breast stimulates a relationship between mother and child that strikes deep into the lives of both. Consequently a child that is deprived of this birthright may miss something essential to his future welfare.

But the problems of artificial feeding have been largely overcome. We know with reasonable certainty that we can feed successfully any baby that has been left without a supply of breast milk, not excepting even the premature. Likewise the age-old mysteries of nutrition are as an open book to us now. Scurvy, rickets, and other nutritional diseases have been reproduced in the laboratory on animals. The diets that produced them and the diets that cured them are well known to us all. Recent experiments have revealed the presence of a vitamin that influences reproduction. What the future holds in secrets of nutrition we can but guess, though we feel sure that much is still in store for us.

INFECTIONS

Along with the problems of feeding and nutrition we have learned the importance of the ever present acute upper respiratory infections. The common cold is not to be looked upon lightly. Mothers are being taught that the discharging nose of the run-about child is not a necessary part of child life. Infections are the greatest stumbling block to infant feeding. If the general practitioner who feeds most of the babies would remember this point and blame the stomach and bowel upsets on infections and not on the foods he would be more successful. The great improvement in the methods of handling milk plus the increased knowledge of child hygiene among mothers has eliminated many of the gastrointes-

tinal diseases that were so frequent and fatal a decade ago.

THE FOUR HORSEMEN

Whooping cough, measles, diphtheria, and scarlet fever—named in order of their importance—no longer present an unbroken phalanx against the defenseless child. Great gaps have been made in their line, and two of their death-dealing warriors have been laid low.

Since the advent of toxin-antitoxin the medical profession has been convinced that a world free from diphtheria is just as possible as a world free from typhoid fever. It should no longer be necessary to put forth arguments in defense of the preventive treatment of diphtheria. Every mother who reads knows of it, and only those poor deluded souls who follow after vagaries in religion and medicine are denying their children this priceless boon.

Scarlet fever antitoxin has come, and while not as near perfect as diphtheria antitoxin, yet it is proving to be of great benefit in the more severe types of the disease. In most cases after administration the temperature drops abruptly and the dangerous toxemia is relieved. This enables the patient to cope more successfully with the secondary infections. Complications are less frequent, the course of the disease is shortened and recovery more certain. Serum sickness in a considerable percentage of cases is troublesome, and in a few sensitive patients the reaction is alarming. Those patients who give a history of asthma or eczema or those who have been given previous injections of horse serum should be handled with extreme caution and the possible danger of anaphylaxis explained to the family.

Scarlet fever prophylaxis is as yet not out of the experimental stage. Many physicians are using it, but certainly it has not been given an unqualified endorsement by the leading workers in this field of experimentation. Those who feel justified in using it should make it plain to the parents that prolonged and absolute immunity cannot be promised. There can be no doubt that in the very near future the prevention of scarlet fever will be as simple and certain as the prevention of diphtheria is today.

Measles and whooping cough are still unprovided with immunizing treatments. Convalescent serum confers a temporary immunity and is of benefit in treatment of measles just as it is in many other acute infections, but nothing definite has been developed in the way of a practical prophylactic treatment comparable to those of diphtheria and scarlet fever. There seems to be a dispute between the American and the European workers on experimental measles as to the nature of the causative organism. Tunncliffe and Hoyne are working with a diplococcus, while others hold to the belief that a virus is the cause. Doubtless the cause and prevention will both be worked out soon.

Whooping cough, on the other hand, while not wholly preventable is amenable to a variety of effective treatments. The early diagnosis of whooping cough by means of the white blood count has caused us to renew our faith in the use of vaccine. A distinct leukocytosis with a high percentage of lympho-

cytes in the presence of a cough, however mild, will warrant a strong suspicion of pertussis. In the presence of an epidemic the use of whooping cough vaccine as a preventive measure is justifiable and unquestionably it confers a period of immunity. Just how long this period is we cannot say. Other measures that have proven of value in treatment are ether in the muscle or mixed with oil and injected into the rectum, and x-ray exposures of the chest during the whooping stage.

In addition to those already mentioned there is a long list of diseases of children that are holding the attention of the scientific investigator, a full discussion of which is not the purpose of this paper.

Two or three may be discussed briefly.

Among the more recent studies of interest in epilepsy are those of Peterman, Cuneo, and Robertson. These workers have demonstrated that a tendency toward alkalosis will precipitate convulsions, and an artificially produced acidosis will control the attacks. Starvation therefore is a most effective treatment of epilepsy, because among other changes in the metabolism starvation produces an acidosis.

TREATMENT OF PURPURA HEMORRHAGICA BY THE USE OF THE MERCURY VAPOR QUARTZ LIGHT

Sooy and Moise have found that the blood platelets increased from 108,000 per cm. to 546,000 per cm. in twelve days. Treatment by transfusion in these cases is not of lasting benefit, and splenectomy in the acute cases is attended by a very high mortality. If these results are confirmed by others we may feel that at last we have something of benefit for this hitherto baffling condition.

I shall mention but one other condition and that is, sinus disease in children. More than three years ago Marriott and Claussen were able to prove to their own satisfaction that sinus infection in children is a rather frequent condition. The nose and throat specialist, on the other hand, has been very slow to take the definite stand on this question that we would wish for. The existence of empyema of the maxillary antrum is thoroughly established in the minds of most physicians, but such is not the case with infections of the sphenoid and ethmoid sinus in young children. In my own experience I have found that the average nose and throat surgeon will often postpone drainage of the mastoid antrum in infants long after what to me seems a clear indication.

The pediatricist who observes his patients carefully is better able to decide when operative measures are indicated than the surgeon who is called in and sees the child but once or twice. This I believe to be true not only of sinus disease, but also of many other conditions.

We as guardians of the health of children entrusted to our care are shirking our duty and belittling our specialty when we allow others to make important decisions that we should make for ourselves.

SOME REMARKS ON THE ART AND SCIENCE OF UROLOGY*

By H. A. ROSENKRANZ, M. D.
Los Angeles

THIS paper, intended to be for the good of urology and the art and science of medicine as a whole, is addressed not only to the urological members, but to all physicians of the regular school of medicine, that school which, founded upon a thorough course of education seeks to diagnose and heal the sick by every known method that possesses any value whatsoever, and to the governing boards of our state and county medical societies.

Inasmuch as there has been so much confusion wrought in the public mind during the past few years on account of the ever increasing crops of pulse diagnosticians, herbalists, spinalists, psychospiritists, electronists, occultists, electric belt revivalists; etc., it behooves the regular school of medicine to serve the public to the extent of setting forth some fundamental facts. It is only by publicity that we can give the laity the information that they are seeking and that they are entitled to. If we do not explain the fundamentals of disease and health and our relation thereto to the public, the public will be served as it has been in the past by false and sectarian propaganda, thoroughly and aggressively organized on a business and paying basis with the result that the art and science of regular medicine will recede into a weakly defensive position overshadowed and encroached upon by cultists.

Advertising—The arguments that I have most frequently heard against advertising are:

1. "I have all the patients that I can take care of, haven't you? Why try to get more?" It is this attitude of self-sufficient indifference that is partly to blame for our cult-ridden condition. Without building up a large practice, how can a physician acquire that amount of experience and resources necessary for the organization and maintenance of an institution where research may be carried out, medical science advanced, and the public most efficiently and economically served?

Argument No. 2. "Doctors can't guarantee their services hence shouldn't advertise." Those of you who have tried to extract a guarantee from an automobile dealer or repair man will readily classify the form of mind that advances this gesture.

Argument No. 3. "The quacks indulge in publicity, so we shouldn't do it." Would you interdict the sale of the Bible because someone else is circulating dime novels?

Argument No. 4. "It isn't nice to advertise—isn't done." Perhaps the moving-picture industry sensed this very bad taste when it discontinued its "advertising department" and substituted a "publicity department." The name was changed and everybody was happy. A constructive truth needs no apology. Life and health are important subjects. We physicians have assumed a responsibility in treating the sick who come to us, and we also owe to the public such information as will make most available and effective the methods of preserving health.

* Chairman's address, Urology Section, at the Fifty-Sixth Annual Session of the California Medical Association, April 25-28, 1927.

and life. Our shrinking modesty has resulted too often in the patient being forced to obtain his information on these subjects from irregulars whose blatant, subtle and destructive propaganda is always available. The cultists have long been awake to the effectiveness of organized publicity. Physicians know that a *very large percentage* of patients who are treated by sectarian healers believe that they are being treated by members of the regular medical profession. The prefix of "Doctor" or "Physician and Surgeon" leads most patients to believe that the healer is a member of the regular school. That most constructive bill that was vetoed by the predecessor of our present governor, a bill that made it obligatory for every practitioner of a healing art, science, cult or sect to display upon his office door the name of the school of healing that he represented so that patients might not be misled, was intended to serve the public. It was fair to all. Of course the cultists who were masquerading as regular doctors objected and the governor, perhaps believing that their political power was greater than that of the regular school, vetoed the bill. Until a few months ago our classified telephone directory made no distinction between regular and irregular practitioners, and a surprisingly large number of patients have told me that they have been misled thereby. I venture to say that out of one thousand people who have some kind of an idea of what an osteopath or a chiropractor is, not one knows what the name orthopedist represents, or even knows that regular medicine has a specialty that treats diseases of the bones, joints, and nerves.

Ours is an old and glorious heritage, ever seeking the new in science and invention to apply to the healing of mankind. Are we not discriminating against the laity as well as against ourselves when we permit the public to give us the same classification and rating as the irregulars who have decreed that one minute of their education is equal to one hour of ours and whose object in taking up their cult, it is only reasonable to presume, is to obtain a *quick* license to heal everybody; a license made legal partly because of our lack of organized and aggressive publicity. The public should once and for all know that regular medicine never has objected and never will object to the recognition of any practitioner who has given adequate time to the study of anatomy, physiology and disease. The method of treatment will take care of itself provided the student understands the aforementioned fundamentals. Those cultists with whom healing is a business stress *treatment*, knowing that the unthinking majority delight in having something new, bizarre and mysterious done for them, or rather to them.

An ancient philosopher once said that there were three roads, an extreme right, an extreme left, and a middle course, the latter being the one of choice. Cannot we inaugurate a middle road of dignified publicity, thereby maintaining a higher degree of order within our own ranks and clearing up the confusion that exists in the minds of the laity? Inasmuch as the lack of readily available information has tended to direct a large proportion of the sick into irregular camps, I would suggest that each county medical society serve the public by maintain-

ing a publicity bureau as outlined below, and that the existence of such a service be given widespread publicity—*paid advertising*—in the press. Information concerning physicians might be tabulated as follows:

1. Name, address, and telephone numbers.
2. Specialty, if any.
3. Premedical education.
4. Graduate of ——— Medical School. Date ———.

The foregoing information should be handed out or mailed for the asking, absolutely without comment. A similar list of the members of each specialty should likewise be available. Telephone or any other form of incomplete or uncontrollable information should be disallowed.

Advancements in Urological Practice—Inasmuch as most urological patients who require surgery are well past middle life (one-third of all men past the age of 50 develop a tumor of the prostate) urologists have had to extend themselves to develop a technique that would insure success in those cases that in years gone by were looked upon as comparatively poor risks. In the olden days when the general surgeon was doing the bulk of prostatic surgery the mortality ranged around 85 per cent and higher. The urologist has gradually and painstakingly developed a system of preoperative, operative and postoperative technique whereby this mortality has been reduced to between 1 and 3 per cent. In order to achieve this remarkably low figure the urologist has had to keep abreast not merely of all that is good in urology, but has had to safeguard his patients against such complications as pneumonia, heart weakness, etc. Every phase of the patient's health and disease must be diagnosed, considered and acted upon. The urologist who refuses to operate during an acute or recent (even though mild) bronchitis, who gives his patient a prophylactic course of respiratory vaccine, who assures himself on the morning of operation that the patient has not developed a bronchitis during the night, who doesn't do a prostatectomy upon a patient unless that patient is feeling fit and who employs preparatory digitalization to safeguard his patient's heart, and who insofar as is possible judges the cardiac reserve as well as the kidney function and blood chemistry, and who doesn't wear out his patient's heart by flooding him with fluids after operation—this urologist may look forward with optimism to a complete cure of his patient from the distressing symptoms of prostatism, and, other things being equal, he will have the lowest mortality rate.

Vaccines—Controlled data on the use of vaccines in strictly urological conditions is rare and, with the exception of gonorrheal arthritis, iritis, etc., the results have not been exceptionally noteworthy, and even in the aforementioned conditions the vaccines must take a subordinate position to other procedures, such as injections of the vasa. I do, however, use vaccines a great deal. Their use is based on one of the soundest principles of medicine. They can do no harm, and probably do more good in urological conditions than we realize. My experience during the past two years has converted me from a skeptic to a strong advocate of respiratory vaccines,

not only from the standpoint of cure, but of prophylaxis against pneumonia, bronchitis, and rhinitis. Dr. Alexander Lambert[†] in checking his thoroughly controlled pneumonia cases over a period of four years sets forth the remarkable result of 42 per cent mortality in groups of cases in which vaccines had not been used as compared with a mortality of 5.8 per cent in those cases that had received respiratory vaccine promptly. These figures show a saving of 86 per cent in the number of lives which might have been lost if vaccines had not been used.

Heart—In our enthusiasm about kidney function and blood chemistry I feel that we have perhaps not given due consideration to the myocardium. I believe that, other things being equal, the surgical risk varies directly as the tone of the heart muscle and inversely as the amount of damage that has been done to the heart cells by either an acute infection such as carbuncle, or by any chronic infection such as pus kidney, rectal fistula, syphilis. In prostatectomy cases a low kidney function may not be dangerous provided the heart reserve, the bronchial condition and blood chemistry are adequate. I have operated upon a patient who during a two weeks' preoperative course had a combined pthalein output varying from 12 to 15 per cent two hours and fifteen minutes after intravenous injection. He recovered as uneventfully as any patient that I have had. On the other hand, I operated upon a patient for renal calculus plus a small pyonephrosis, a man with an equally good blood chemistry and a pthalein output of 38 per cent, whose convalescence was not so happy because his ureter being blocked by a stone, the pus germs and toxins had been drained into the blood stream to poison and weaken his heart muscle. Every case in which there has been drainage of infection into the blood stream should remind us that we may be dealing with an impaired cardiac reserve.

Two-Stage Operation—I would advocate the two-stage operation for prostatectomies not only in those cases in which I have recommended it in previous papers, and in those complicated with a low renal function, but also in those cases in which there is a suspicion of weakened heart muscle. I also favor a two-stage operation in such operations as nephrectomy complicated with a large perinephritic abscess or pyonephrosis. At the first operation we drain the pus and give the heart as well as the other body cells an opportunity to regain their tone.

Anesthesia—I am leaning more strongly to spinal anesthesia every year in bladder and prostatic cases. In my experience it has contributed much to the safety and freedom from complications of these operations. Medicine of the Southland owes a debt of gratitude to Dr. Granville MacGowan, who, among many other important advances, introduced and popularized spinal anesthesia in the Southwest.

Hemorrhage—In my paper read before this section last year I detailed what had proven to be an effective routine in the prevention of hemorrhage. I have made some additions to the list which I believe are of decided value. This routine which has

made most cases of prostatectomy an almost bloodless operation is as follows:

1. For four days preceding operation one cup jello b. i. d.
2. For three days preceding operation calcium lactate gr. XX t. i. d.
3. On evening preceding operation:
 - (a) Fibrogen, two ampoules each in a different place subcutaneously over abdomen.
 - (b) One ampoule calcium lactate intravenously.
4. One and one-half hours before going to surgery:
 - (a) Thyroid extract, gr. 2 to 3 per mouth.
 - (b) Fibrogen, one ampoule subcutaneously.
 - (c) Calcium lactate, one to two ampoules intravenously.
5. Three-quarters of an hour before going to surgery, 2 cc. of oral fibrogen orally.
6. Just before going to surgery, pituitrin one ampoule.

Free Hospital Service—Inasmuch as county hospitals and other charitable hospitals pay their orderlies, cooks, nurses, interns, and residents a salary, the attending staff, which bears a large degree of the responsibility and heavy work, should receive a remuneration. There is an ever growing tendency, especially in eastern hospitals, to recognize the services of the attending staff in this manner. I believe that those governing boards that do not already pay their attending staffs would cheerfully grant their staffs this consideration if the matter were presented to them. The attending staffs have contributed much of their valuable time gratis; they have been so busy serving the public that they have not had time to consider their position in this matter.

Nursing—The regular salaried hospital nurse or orderly is of greater assistance to the urologist in caring for his patients than is the private nurse who is not especially trained in urology, and hardly any private nurses are so trained. There is a growing demand for clean-cut urologically trained male nurses. It would seem that arrangements might be made whereby the nursing curriculum would provide for specialization in this line of work. The patients themselves complain of the lack of urological training of most nurses.

Physiotherapy—A great deal of urological treatment consists of physiotherapy as exemplified by cystoscopy, passage of dilators and catheters, stone crushing, massage, quartz lamp and various arrangements for the production of heat and the various modalities of the galvanic, faradic and sinusoidal currents. Last Friday an old patient reappeared with a chronic prostatitis and requested that I use the hollow quartz ultra-violet ray applicator upon him, because it had given him marked relief once before. I had forgotten that I had used it upon him. My experience with the various modalities of electricity and with the quartz lamp leads me to the conclusion that we have only scratched the possibilities of these physiotherapeutic agents. Physiotherapy has in the past been accused of laying too much stress upon treatment and not enough upon fundamental knowledge of disease. Happily now, however, this stigma no longer ob-

[†] Professor of Clinical Medicine at Cornell.

tains. That stigma has been assumed in a large measure by the dispensers of our old friend the electric belt, a *fifty-dollar* instrument that will produce a blister or a sweat and relieve pain by counter-irritation, all laudable effects when indicated and all readily obtainable for the price of *fifty cents* for a hot bath, a Spanish fly plaster or a bottle of Sloan's liniment. We need an active section on physiotherapy in our state and county medical societies to maintain and direct our enthusiasm in this very important adjunct to therapy.

Closing—These very necessary and enjoyable state meetings are tense, crowded, diverting, and complicated affairs. They are properly dedicated largely to pure scientific progress. Would it not be fitting and proper for our section to have one interim meeting yearly, arranged over a week-end in some quiet central rendezvous like the Hotel Samarkand where we might with greater leisure inaugurate such measures of action and progress as will give added impetus to the advancement of urology?

SPONTANEOUS RUPTURE OF A HYDRO- NEPHROTIC SAC SECONDARY TO URETERAL STONE *

By CHARLES PIERRE MATHÉ, M. D.

AND

GEORGE F. OVIEDO, M. D.

San Francisco

(From the Department of Urology, St. Mary's Hospital,
San Francisco)

DISCUSSION by J. C. Negley, Los Angeles; L. P. Player,
San Francisco; H. A. Rosenkranz, Los Angeles.

ALTHOUGH traumatic rupture of the kidney is not uncommon, spontaneous rupture of that organ is relatively infrequent. The latter usually occurs in kidneys presenting chronic nephritis, tuberculosis, abscess formation, tumor, or infarct. In reviewing the literature up to 1924, Reschke¹⁴ pointed out that there were only a few cases of ruptured hydronephrosis reported up to that time. Rupture of a hydronephrotic sac secondary to the back pressure caused by a calculus presenting urinary extravasation, but without hematuria is exceedingly rare. Henline⁶ reported one such case presenting a huge extravasation seen very late and diagnosed at autopsy. The rupture extended through the upper primary calyx and was secondary to the back pressure caused by a calculus in the right ureter.

PATHOLOGY

In 1856 Wunderlich²² described what he termed spontaneous apoplexy of the renal capsule. He called attention to the fact that perirenal hemorrhage occurred and could be the result of spontaneous rupture of the kidney. Hartmann⁸ and Tuffier¹⁷ reported ruptures due to malignant tumor formation. Doll³ and Szenes¹⁰ are of the opinion that chronic nephritis acts as a predisposing cause for spontaneous rupture of the kidney. Wade,¹⁹ Lippens,¹¹ Lāwen,¹⁰ Connell,² Grasmann,⁴ and Thomas¹⁸ state that rupture can also occur in kidneys presenting tuberculosis, acute focal infection with abscess formation, hemophilia, infarct, hydronephrosis or polycystic kidney. All investigators are

agreed that spontaneous rupture does not occur in kidneys without antecedent pathology.

Küster⁹ collected ten cases of spontaneous rupture of the kidney in 30,000 autopsies and pointed out that the parenchyma of a distended kidney ruptures easily. Herzog⁷ observed sixteen cases in 7805 autopsies. That the parenchyma ruptures more easily than the pelvis is demonstrated by the greater number of the former cases reported. Back pressure into the kidney from incomplete drainage increases the intrapelvic pressure. An increase in the hydraulic pressure within through the blood vessels may then cause the organ to burst. At this time of increased pressure the slightest injury, such as a slight blow over the loin or indirect trauma, such as falling on the feet or buttocks, muscular action, etc., may throw the kidney against the transverse process of the vertebrae causing rupture of a previously pathologic kidney (Morris¹²). As the parenchyma is the weaker portion of the kidney, it usually gives way, causing a rent of the capsule. However, when the pelvic wall has been weakened by chronic inflammation it may rupture; as in the case herein reported. The rupture of the pelvis is seldom accompanied by perirenal hemorrhage because there are no end arteries to be severed. Therefore extravasation of urine without hemorrhage is characteristic of a ruptured pelvis or ureter. Azzurrini¹ emphasizes the prominence of hemorrhage in nontraumatic rupture of the parenchyma. Orr and Ewing¹³ report a remarkable case in an Arab woman, in which a stone ruptured through the kidney lodging in the loin causing a spontaneous wound from which pus, but no urine, exuded. Watson and Cunningham²¹ go so far as to state that rupture of the parenchyma, although frequently accompanied by perirenal hemorrhage, rarely causes extravasation of urine.

Although traumatic rupture of the kidney is fairly common spontaneous rupture of that organ is more or less infrequent. The latter usually occurs in kidneys presenting tumor, abscess formation, tuberculosis or chronic nephritis. In our case a rupture occurred in a hydronephrotic sac secondary to back pressure caused by a stone. As this condition is relatively rare, and as there are not many such cases reported in the literature, we herewith present this case.

Mr. A. B., age 32, purchasing agent. Referred by Dr. Edward Salomon. Admitted to the urological service of St. Mary's Hospital, March 26, 1924.

In November, 1923, the patient experienced a severe, sudden, sharp pain in the right lumbar region, nonradiating in character. This disappeared in two days without any treatment. It was not accompanied by nausea and vomiting, nor by any urinary symptoms. He did not notice the passage of any stone or gravel after the attack. He was well until March 19, 1924, when he developed an excruciating, continual, sharp pain in the right lumbar region radiating to the right groin. It was accompanied by nausea and vomiting, abdominal distention and cold perspiration of the body. There was also slight dysuria and nycturia 2. For some time prior to the attack he had noticed that the urine was somewhat cloudy, but it never had had the appearance of containing blood. He gave no history of direct trauma nor indirect injury. Temperature varied between 100 and 102.2 degrees F. and the pulse from 100 to 120.

Physical Examination—Head, heart, and lungs were negative. Blood pressure systolic 110, diastolic 68. In the

* Delivered before the Urological Section of the California Medical Association.

right upper abdominal quadrant a very tender, round mass was palpated corresponding to the lower half of the kidney. It moved with respiration. The muscles overlying this mass were somewhat rigid. There was tenderness on deep pressure in the right costovertebral angle. No particular tenderness was elicited in palpating the left renal fossa.

Laboratory—Hemoglobin, 70 per cent; erythrocytes, 4,360,000; leukocytes, 14,100; polymorphonuclear leukocytes, 81 per cent; large mononuclear lymphocytes, 6 per cent; and small mononuclear lymphocytes, 13 per cent. Catheterized specimen showed a slightly turbid, deep amber-colored urine containing a slight trace of albumen, sugar negative, specific gravity 1017, and an alkaline reaction. Microscopical examination revealed numerous amorphous phosphates and carbonates, leukocytes varying from 10 to 12 cells to the high dry field, erythrocytes in abundance and numerous gram positive staphylococci. Phenolsulphonephthalein test (intramuscular) 44 per cent recovered in two hours.

X-ray Examinations—The right kidney was enlarged. There was a round area of increased density about the size of a cherry stone seen below the right kidney in the line of the ureter. No evidence of stone in the left kidney, lower ureter, or bladder region.

Cystoscopy, March 23, 1924—There was considerable injection of the trigone. The right ureteral orifice was deeply injected and somewhat edematous. The ureteral spurt on this side was very much delayed and weakened. The left orifice and ureteral spurt were normal. The mucosa in the second and third bladder zone had a grayish-red appearance. In passing a No. 6 x-ray catheter up the right ureter a definite solid resistance was encountered 20 cm. from the ureteral orifice. No force was exercised and the catheter was left in place for study. A catheter was passed into the left renal pelvis with ease. The drainage of urine from the right kidney was very slow and contained numerous leukocytes, erythrocytes and gram positive cocci. 0.0006 grams of phenolsulphoneph-

thalein was injected intravenously, and appeared in eight minutes on the right and four minutes on the left side. In a half hour 5 per cent was recovered on the right and 30 per cent on the left side. Because of the weakness of the patient no pyelogram was made. On March 25, the temperature dropped to 100 degrees and the pulse to 90. The next day the patient developed a severe chill lasting one hour, following which the temperature rose to 106 degrees and the pulse to 142. The leukocytosis increased to 25,450 with a polymorphonuclear count of 93 per cent. A progressive jaundice developed. A definite immovable tumor mass appeared in the right upper quadrant 10 by 15 cm., which was exquisitely tender. The overlying musculature became more spastic and the costovertebral angle more tender. Because of the severity of the symptoms it was decided to intervene at once.

Operation—Pylotomy with repair of pelvis by Mathé and Salomon. A curved linear lumbar incision was made on the right side. In incising the lumbar fascia one could see considerable distention of the retrorenal leaf of the perirenal fascia. The fascia was fluctuant and gave the appearance of containing fluid under pressure. On incision of Zuckerkindl's fascia 100 cc. of urine were liberated into the incision. The pelvis was then palpated and a stone about 1 cm. in diameter was located at the uretero-pelvic junction. A small aperture in the pelvis was located above the calculus from which urine exuded. This was enlarged by incision through which the calculus was removed. The aperture was then closed with interrupted No. 00 catgut sutures. A soft rubber tissue drain was placed against the pelvis and brought out through the upper end of the incision and the wound closed in the usual manner.

Diagnosis—Calculus in right kidney pelvis and ruptured hydronephrosis with urinary extravasation.

Postoperative Course—Immediately after returning from the operating room, the jaundice which was formerly well defined had diminished considerably and disappeared in forty-eight hours. The patient ran a fever varying from 100 to 103 degrees F. for eighteen days following the operation. The incision drained considerably during this period necessitating its widening for better drainage. Eleven days after the operation the patient developed a severe brachial neuritis, which persisted for thirty-four days and finally disappeared after one intravenous injection of 28 cc. of a 1 per cent solution of mercurochrome. The patient was finally discharged from the hospital on May 4, 1924, free from pain and from jaundice, the lumbar incision having closed with a slight hernia. He was seen eighteen months later in good health with no recurrence of stones or symptoms.

SIGNS AND SYMPTOMS

It is well to classify the symptoms into (1) general, (2) urological.

General—The patient is always acutely ill, and as the condition continues he rapidly passes into shock. At first the temperature is subnormal, due to shock. Later there are increases in the temperature and pulse, which rapidly rise and are sometimes preceded by a chill. Doll³ states that it rises rapidly, due to the absorption of fibrin ferment. Leukocytosis is always present. The temperature may be high and continual, or intermittent. There are signs of general cachexia, such as malaise, weakness, loss of appetite and weight.

Urological—There is a relative paucity of urinary findings in comparison to the severity of the illness. Increased frequency, dysuria, and hematuria are uncommon. The urine findings may be such as are found in any acute toxemia, a trace of albumen with occasional white blood cell, red blood cell, and cast. This may be explained because of the fact that the urine with which one is chiefly interested does not reach the bladder but is extravasating about the kidney. The extravasation causes pain and tenderness

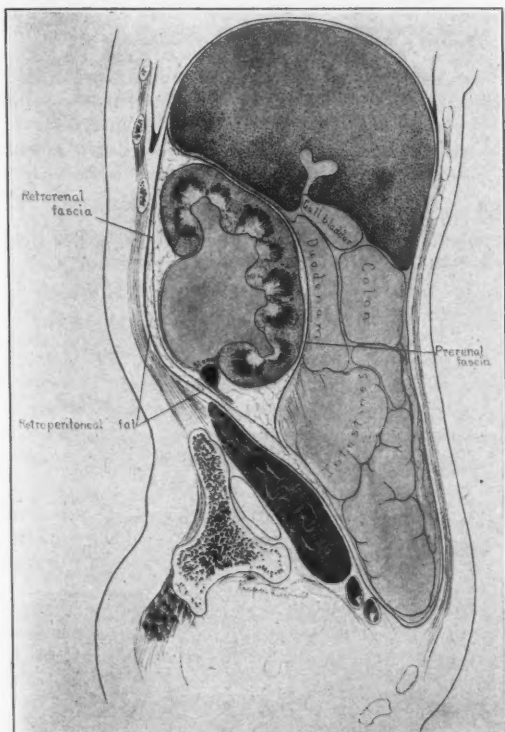


Plate I—Schematic sagittal section of kidney prior to rupture. The wedge-shaped calculus at the uretero-pelvic junction has caused back pressure resulting in considerable dilatation of the pelvis.

in the involved lumbar region, radiating anteriorly to the upper abdomen and at times extending to the inguinal region. Renal colic may be present before the rupture, but rarely afterward. Painful and spontaneous sensibility of the upper abdomen to pressure is present, which augments as the urinary extravasation increases. There is pronounced distention of the abdominal walls which is due to reflex irritation of the splanchnic nerves. Immovable dulness and tumor formation develops in one flank. The tumefaction may present fluctuation and ballottement. Signs of peritoneal irritation such as meteorism, vomiting, nausea, singultus, and jaundice occur as the extravasated urine encroaches upon the peritoneum.

DIAGNOSIS

Because of the magnitude of the general signs and symptoms, the diagnosis of a ruptured hydronephrotic sac is difficult. A careful history of former attacks of renal colic or lumbar pain, followed by an acute onset of pain, tumor formation, shock, increase in temperature, signs of peritoneal irritation together with relatively negative urine findings, is of great importance in determining the diagnosis. One must not be misled by the accompanying general signs and symptoms. They may suggest other conditions such as acute cholecystitis, impacted gallstones, intestinal obstruction, ruptured gastric and duodenal ulcer, acute pancreatitis, perinephritic abscess or perirenal hematoma. A good plain roentgenogram of the kidney is essential, as it can show a shadow which demonstrates the existing calculus. Pyelography should not be employed, as the patient is always critically ill. However, it is well to pass a bismuth catheter so that the location of the suspected shadow can be determined. In the case herein reported the presence of a shadow in the right upper quadrant, although suggestive of an impacted gallstone, was diagnosed as a urinary calculus by the passage of a catheter.

TREATMENT

Immediate surgical intervention either radical or conservative, is the only hope of saving the patient's life. If the rupture extends through the parenchyma and capsule the accompanying hemorrhage must also be checked. Adequate drainage of the surrounding tissue extravasated by urine must also be instituted. If seen within a few hours after rupture and the kidney does not appear to be too badly destroyed by some concurrent pathological process, then one can simply remove the obstructing calculus, repair the ruptured pelvis or parenchyma, pack and drain widely. The entire kidney should be exposed, delivered into the incision and carefully inspected for additional rents, tears or rupture of the parenchyma or pelvis. This type of conservative treatment was favored by Connell,² Lippens, and others in the treatment of small ruptures of the kidney, be they spontaneous or traumatic. This was employed in our case, but was followed by a rather prolonged convalescence with complications consisting of persistent infection of the renal fossa requiring subsequent drainage, severe brachial neuritis, and finally by a hernia at the site of the incision. If the kidney is considerably destroyed or the hydronephrosis well advanced, nephrectomy is the treatment of choice,

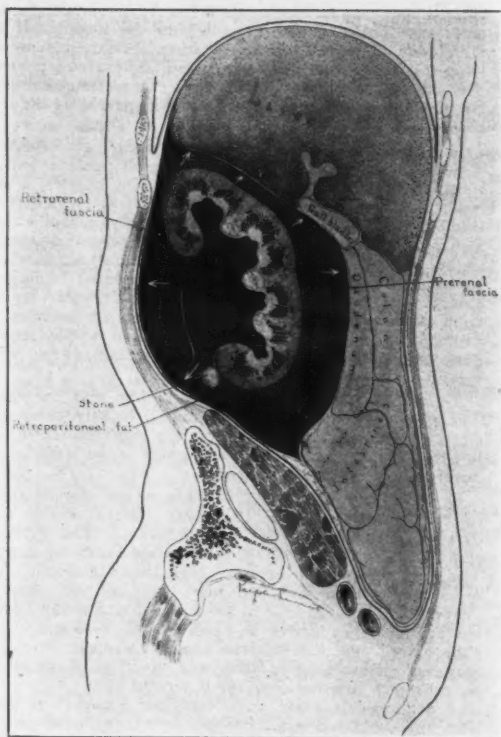


Plate II—Sagittal section of kidney following rupture of the pelvis. Note that the extravasated urine is contained within the pre- and retrorenal fascias causing considerable pressure and encroachment on the surrounding structures.

provided, however, that the opposite organ is normal. Speese¹⁵ emphasizes the fact that when one operates early the added factor of infection of the perineal space having not developed does not require attention. Nephrectomy has been successfully employed by Thomas,¹⁸ Lippens,¹¹ Speese,¹⁵ Watson,²⁰ and others in treating ruptured kidneys in general. It assures the removal of the infected focus and the elimination of the cause of the extravasation of urine and infection of the perirenal space. It is less likely to be followed by after effects such as suppuration giving rise to permanent fistula, kidney atrophy, parenchymatous or interstitial nephritis, and future stone formation. It is our belief that the convalescence of the case herein reported would have been shortened and unaccompanied by as many postoperative complications had nephrectomy been performed.

CONCLUSIONS

1. Back pressure into the kidney, due to insufficient drainage may be sufficient to destroy its major portion causing spontaneous rupture of the parenchyma or pelvis.
2. Spontaneous nontraumatic rupture of the kidney always occurs in those presenting some antecedent pathology such as tuberculosis, acute focal infection or abscess formation, hemophilia, infarct, hydronephrosis or polycystic kidney.
3. Rupture of the parenchyma is far more common than rupture of the pelvis.
4. Rupture of the parenchyma is more likely to be accompanied by perirenal hemorrhage, whereas

that of the pelvis or ureter is usually followed by extravasation of urine without hemorrhage.

5. Immediate surgical intervention is the only successful treatment. If seen early, removal of the obstructing calculus, conservative repair, packing and drainage will suffice.

6. In advanced cases nephrectomy is the treatment of choice. It is less likely to be followed by complications.

REFERENCES

1. Azzurrini, F.: Contributo allo studio delle Emorragie Perirenali. *Criptogenetiche*, Lo Sperimentale, 1912, lxvi, 479.
2. Connell, F.: Simple Subparietal Rupture of the Kidney, *Surg., Gynec., and Obst.*, 1916, xxii, 663.
3. Doll, H.: Die Apoplexie des Nierenlagers, München. *Med. Wchnschr.*, 1907, liv, 2417.
4. Grasmann, K.: Zur Ätiologie spontaner Massenblutungen ins Nierenlager, *Deutsch. Ztschr. f. Chir.*, 1923, clxxviii, 416.
5. Hartmann, M.: *Bull. et Mém. d. l. Soc. d. Chir.*, 1906, xxxii, 695.
6. Henline, R.: Spontaneous Rupture of the Kidney, *J. Am. M. Ass.*, 1924, lxxxiii, 1411.
7. Herzog, H.: Über Nierenverletzungen, München. *Med. Wchnschr.*, 1890, xxxvii, 198.
8. Küster, E.: Zur Entstehung der subcutanen Nierenzerreissungen und der Wanderniere, *Arch. für klin. Chir.*, 1895, i, 676, 686.
9. Küster, E.: Die chirurgischen Krankheiten der Nieren, Stuttgart, Enke, 1896-1902, cxiii, 721 p. Lfg., 526, *Deutsch. Chirur.*
10. Læwen, L.: Über das sogenannte perirenale Hématom und andere spontane retroperitoneale Massenblutungen, *Deutsch. Ztschr. f. Chir.*, 1912, cxiii, 367.
11. Lippens, A.: L' Hématome Périrénal Spontané, *Jour. de Chir.*, 1913, xi, 1.
12. Morris, J.: Surgical Diseases of the Kidneys and Ureters, 1901.
13. Orr-Ewing: Extrusion of a Renal Calculus Causing Sinus in Loin, *Lancet*, 1921, cci, 230.
14. Reschke, K.: Über Hydronephrosenruptur, *Deutsch. Ztschr. f. Chir.*, 1924, clxxv, 137.
15. Speese, J.: Perirenal Hematoma, *Surg., Gyn., and Obs.*, 1913, xvi, 571.
16. Szenes, A.: Spontanruptur der Niere mit Massenblutung ins Nierenlager, *Ztsch. f. Urol.*, 1923, xvii, 276.
17. Tuffier, M.: Hématome sous-péritonéal diffus par rupture spontanée d'un Sarcome du rein droit, *Bull. et Mém. d. l. Soc. d. Chir.*, 1906, xxxii, 692.
18. Thomas, G.: Spontaneous Rupture of the Left Kidney, *Lancet*, 1917, xxxvii, 84.
19. Wade, H.: Spontaneous Rupture of the Kidney with Secondary Perirenal Hemorrhage in Acute Toxic Nephritis, *J. M. Res.*, 1915, xxxii, 419.
20. Watson, F.: Subparietal Injuries of the Kidney, *Boston Med. and Surg. Jour.*, 1903, cxxxxiii, 29, 64.
21. Watson and Cunningham: Diseases of the Kidneys, 1908, ii, 119-20.
22. Wunderlich, K.: *Lehrbuch der Pathologie und Therapie*, 1856, iii, 426.

DISCUSSION

J. C. NEGLEY, M.D. (809-816 Haas Building, Los Angeles)—Doctor Mathé has reported, in a masterful way, one of the rare conditions encountered in urology. Two important diagnostic points have been omitted. First, nothing was said about the character of the drip or amount of urine collected from the catheter in the right ureter. If the drip was steady and continuous for the entire period of collection, then one would assume that they were dealing with a hydronephrosis, but one in which there was not an entire blocking of the ureter. Since there was not an entire blocking of the ureter, it makes it questionable as to whether enough pressure could develop behind the calculus as to cause spontaneous rupture of the pelvic wall and would lead one to think that perhaps there had been some slight or moderate trauma to this region that had been forgotten by the patient. The second omission was intended in that no pyelogram was attempted and, of course, no one but the surgeon in charge of the case could determine as to the advisability of that procedure. However, I believe that since urine dripped by this calculus for a period of half an hour and if the amount of urine had been measured, an equal amount of any chosen pyelographic media could have been injected with safety and should have aided in the preoperative diagnosis, for in all probability the pyelographic media would have leaked through this opening in the pelvis and made a diagnosis possible by x-ray.

However, it is always easy to map out a plan of procedure after the findings (including operation and post-mortem, if any) are all in but much more difficult on a patient so acutely ill as was this one. Doctor Mathé is to be congratulated on the splendid results he obtained in this case.

L. P. PLAYER, M.D. (384 Post Street, San Francisco)—Doctor Mathé's contribution pictures very beautifully the

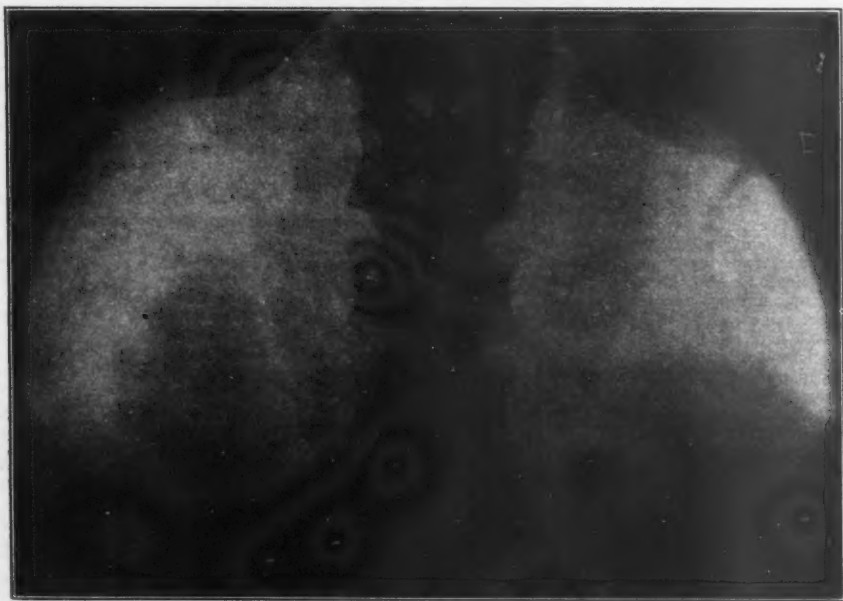


Figure 1—Plain roentgenogram taken prior to rupture, demonstrating enlargement of right kidney and calculus below it in the line of the ureter

difficulties encountered in making a differential diagnosis between actually acute surgical kidneys and similar conditions in contiguous intraperitoneal organs which give practically the same symptoms and signs. The value of plain and stereoscopic preliminary x-rays is justly emphasized.

His surgical procedure in the reported case is to be commended, as too many kidneys are sacrificed unnecessarily. A stormy recovery and a slight hernia at the point of incision are negligible when one considers preservation of an important organ.

I have had one case, due to very slight trauma, which parallels quite closely the case reported by the essayist in which the patient crawled through a window and ruptured a hydronephrotic kidney, caused by an impacted ureteral stone, by simply rolling over the window ledge.

H. A. ROSENKRANZ, M.D. (Story Building, Los Angeles)—I cannot recall a case of spontaneous rupture of the kidney, but this very interesting and instructive report and resumé of Mathé and Oviedo has impressed me with the following points:

1. The necessity of making a prompt quantitative as well as qualitative diagnosis of renal rupture so that an immediate operation may repair the damage, thereby obviating the occurrence of complications that might make necessary a sacrifice of the kidney, later on.

2. The advisability of expectant treatment in those cases in which the trauma has probably been slight and the symptomatology not severe.

At the Los Angeles General Hospital there have come under my observation during the past eleven years about three cases per year of traumatic rupture of the kidney. All of these including those that presented definite tumefaction in the loin and also those that had repeated hemorrhages during the weeks of convalescence recovered without operation under treatment selected from the following list of therapeutic measures: (1) rest in bed; (2) morphin; (3) ice bag to loin; (4) calcium lactate by mouth and intravenously; (5) fibrogen subcutaneously; (6) fibrogen orally; (7) feeding of jello; (8) thyroid extract and pituitrin.

With the exception of numbers 1 and 3, I employ all of the aforementioned measures rather routinely prior to operation as prophylaxis against bleeding. The results have been uniformly good. I know of no measures except the bladder pack which have been introduced in recent years that have lessened the occurrence of hemorrhage, or stopped the already present hemorrhage so effectively as the foregoing ones in prostatectomy cases.

In connection with rupture of the kidney the necessity of a safe technique in pyelography should be emphasized. About a year ago there was referred to me for nephrectomy a case upon whom pyelography had been performed. The operation disclosed a very large kidney studded with hematomata varying from one-eighth to one-half inch in diameter. The sclerosed pelvis mentioned by Mathé and Oviedo are also inclined to split and crack under the stress of a comparatively low degree of hydrostatic pressure just as does the strictured male urethra.

Along with conditions causing hematuria should be mentioned the not infrequent cases of renal arteriosclerosis in the aged that develop a spontaneous rupture of an intrarenal vessel. These cases are negative to cystoscopic diagnoses and are often free from hematuria for years at a time. They have made up a percentage of so-called essential hematurias and are diagnosed by negative urinary and cystoscopic findings plus the presence of marked arteriosclerosis elsewhere.

It might be well here to correct an impression that still persists among many practitioners that a patient should not be cystoscoped while he is having an active hematuria. Many a diagnosis has become confused by adherence to this erroneous belief. Cystoscopy should be performed as soon as possible in almost all cases.

I would emphasize the importance of x-raying all cases of renal trauma. The presence of calculi in a ruptured kidney may cause the complication of perinephritic abscess and should call for immediate operation. I was called in on one such case, almost moribund. The trauma had occurred several weeks previously. There were multiple calculi and a perinephritic abscess that extended up around the aorta and vena cava.

The authors' statement that rupture of the pelvis is seldom accompanied by perirenal hemorrhage is borne

out by a case that I saw Prof. Felix Legueu do a nephrectomy upon some thirteen years ago at the Hospital Necker. The patient had been run over by a wagon about two and one-half weeks previously. A $\frac{3}{4}$ -inch longitudinal tear was found in the pelvis, the kidney being surrounded by about a pint of foul urine, but no blood.

I like the authors' technique of suturing the opening in the pelvis. For years I have been routinely suturing incisions in the pelvis or ureter with No. 1 or No. 0 plain catgut, running suture, and it is rarely that any urine appears in the incision after operation.

In the case of Mathé and Oviedo I believe that the rupture was facilitated by erosion and pressure atrophy of the pelvis, due to direct action of the calculus as well as by the intrapelvic urinary pressure. I have removed a number of calculi from renal pelvises in which the pelvis consisted merely of thin bluish translucent membranes caused by the two aforementioned conditions.

Mention by the authors of the postoperative hernia is interesting. I have seen three cases of hernia in this region. One was in the location of Petit's triangle in a young man who had noticed it for several years. It was spontaneous, he not having been operated on. Another was in a woman who had already had two operations in the right renal region resulting in an atrophic muscular wall extending several inches around the scar. I performed a nephrectomy after which there was a large hernia. A general surgeon later on removed the patient's gall bladder and repaired this hernia at the same time. The site of the hernia operation became infected and the result was poor. The third case was in a missionary who had a tuberculous kidney removed in China about four years ago, the incision being closed without drainage. In due course an abscess formed, ruptured, and a six-inch hernia resulted. This patient was a fairly vigorous middle-aged man. C. P. Thomas and I performed what seemed to be a very thorough plicating operation, somewhat similar to the one for umbilical hernia. The result obtained was perfect for about eight months, after which time I noticed a recurrence of the bulging in the loin. I am convinced, however, that this was merely a universal giving way of the atonic thinned muscular walls and a splitting open of the hernia incision. These last two cases are a strong argument for a prompt operation in lumbar hernia so that the repair may be made before muscular atrophy has progressed too far.

I feel that the authors are to be congratulated upon the sound recommendations that they have deduced from the study of their case which is a distinct contribution to this important subject.

AUTHORS (closing)—We wish to express our appreciation for the general discussion of our paper emphasizing the importance of rupture to the kidney, be it spontaneous or traumatic. Back pressure alone into the kidney may be sufficient to cause spontaneous rupture of a kidney, provided, however, that there have been antecedent pathological changes such as nephritis, focal infection, infarct formation, etc. It also increases the intrapelvic pressure to such an extent that a slight blow, indirect trauma, or jar may press this impaired organ against the transverse processes of the vertebrae easily causing rupture of the kidney. This was demonstrated by Player's patient, who ruptured a hydronephrotic kidney by the slight pressure that the act of crawling over a window ledge exerted on this weakened organ in which the hydrostatic pressure within was already increased. We have quoted numerous similar cases from the literature. This fact is of great importance in industrial surgery in determining the compensability of the case presenting a kidney rupture which is due to rather slight trauma. The parenchyma tears more easily than the pelvis and is the most frequent site of rupture. It is usually accompanied by intra- or perirenal hemorrhage. Rupture of the pelvis is less common, rarely followed by perirenal hemorrhage, but frequently accompanied by extravasation of urine. This is emphasized by Rosenkranz's observation of Legueu's case in which a tear of the pelvis seven-eighths of an inch long resulted in perirenal extravasation of urine, but in no hemorrhage.

Negley does well to emphasize two very important diagnostic signs—the character of the drip and the measurement of the amount of urine collected by the ureteral

catheter. In our service at St. Mary's Hospital it is our procedure to observe these signs on every case and carefully record them on a cystoscopic chart. Negley apparently overlooked the observation noted in our description of the cystoscopy performed upon our case in which we stated that the urine from the right kidney drained very slowly. The slow drainage and small amount of urine collected were unquestionably due to the fact that the calculus was causing almost complete obstruction at the ureteropelvic junction, as clearly indicated in Plate 1. We feel that pyelography was contraindicated in this particular case because of the extreme weakness of the patient at the time. If the patient's general condition had improved it might have been performed at a second cystoscopy. However, sudden rupture necessitated immediate operation. Careful questioning failed to reveal any history of trauma either remote or recent.

Rosenkranz clearly discussed the importance of making an early diagnosis of kidney rupture in order to ascertain its extent and to institute the proper treatment. We wish to emphasize that a sudden rapid rise of temperature and pulse, increase of the leukocyte count accompanied by general weakness and shock, progressive tumefaction, appearance of an immovable dullness in the upper abdominal and lumbar region are indications of rather grave type of rupture demanding immediate surgical intervention. The sooner the operation the more likelihood there is of preserving the kidney. In cases in which the rupture is slight the treatment outlined by Rosenkranz is particularly good when there is co-existent hemorrhage. On account of the protracted illness of the patient a repair of his hernia was not attempted. It would be well to do this before muscle atrophy has progressed too far.

CRETINISM AND ITS RELATION TO THYROID DISEASE*

By CHARLES CALVIN TIFFIN, M. D.
Seattle

THAT the thyroid gland prepares from iodine a substance known as thyroxine has been definitely shown by Kendall, also that in a normal healthy individual the quality and the quantity of thyroxine secreted are maintained as the individual requirements necessitate. While the thyroid gland has been called the governor of metabolism, it cannot accomplish its work alone. It must have a normal working agreement with all the glands of internal secretion. Of its association with some of the endocrine glands little is known, but of others more is understood. A conspicuous and everyday observation of a loss of one of the thyroid's chief association in metabolism is the difference, for example, between the steer and the bull. The steer has lost the influence of the internal secretion of the testes. What is the result? Longer bones, less muscular development, and many other conspicuous differences.

Remove the thyroid gland of the young calf and leave the testes, and an entirely different individual develops. In the first instance the incentive to specialized growth has been removed; in the second instance the testes have not been interfered with and yet an artificial cretin is produced with very little or no development of the sex organs and a very poorly developed anatomic structure throughout. The bones are much shortened, the epiphyses are late in closing or fail to close. The hair is poorly developed, the mentality of the animal is disturbed, and the whole endocrine system is upset.

In discussing cretinism it is not necessary to review the characteristics, but I wish to emphasize that there are many types of these unfortunates

whose deficiencies depend on the amount of thyroid tissue remaining, on the quality of the secretion coming from the remaining tissue, and on deficiencies in other endocrine glands. The lack of interest in this subject is greater than it should be, and consequently in most localities not enough is being done to elevate our general level of scientific knowledge in this field. This is more particularly true in publicly maintained institutions, where the most favorable opportunity for study may be found.

Recently I visited a state institution of 800 inmates who are largely congenital defectives. They are cretins of all types, mongolian idiocy of many types, and numbers of other types of defectives. This institution is clean, efficiently managed in every way except that scientific research and study are not carried forward as they should be, and the physicians in the locality do not even visit the institution.

Examination of cretins in the large majority of instances reveals either an irregularly developed cystic type or absence of thyroid gland. Post mortem examination usually shows some remaining vestige of thyroid tissue.

In examining 127 cretins I found the thyroid gland definitely palpable in thirty-seven, indefinitely palpable in forty-one, and apparently absent in forty-nine. In the thirty-seven whose thyroids were palpable the average height of males and females was 48 inches, while it was 45 inches in the forty-one whose thyroid were indefinitely palpable and 47.5 inches in the forty-nine in whom I could detect no thyroid gland. Typical cretins were found from 29 to 68 inches in height. Mental development varied from almost none to mediocre, and in the higher types there was considerable intelligence. Ability to articulate varied from guttural unintelligible sounds to articulated words and sentences.

Of these 127 patients eighty-eight were examined in Switzerland, and thirty-nine were seen in Wyoming, Colorado, Oregon, Washington, Idaho, and California. Of the eighty-eight examined in Switzerland twenty-nine had definite enlargement of some type of the thyroid, nineteen being cystic-pendulous, seven adenomatous, and three colloid hypertrophy. Thirty apparently had vestiges of thyroid tissue, and in twenty-nine I could detect no thyroid tissue. Of the thirty-nine American patients nineteen had no thyroid tissue that could be recognized, seven showed appreciable enlargement of the thyroid, cystic or adenomatous in type, and thirteen had a very small amount of thyroid tissue. The mental development seemed to bear no relation to the thyroid tissue as determined by palpation.

Satisfactory family history records were available for seventy-nine of the 127 patients. Forty-one showed at least one goitrous parent; eleven showed both parents to have had some type of goiter. Five showed that at least one parent had been confined either to a feeble-minded institution or an insane asylum. In eight cretinism had existed in the family, two of the eight having a cretin parent.

A definite history of thyroid or iodine therapy over any length of time was recorded in but eleven cases. Five had been for ten years or more under continuous or nearly continuous iodine or thyroid feeding. Definite improvement had been noted in

* Read before the Annual Session of the Utah Medical Association, Salt Lake City.

eight, some improvement in one, and no appreciable improvement in two. In but four patients had the record been followed by the same observer and no definite notes were made as to what he considered as improvement in five of the eleven patients. In three of these the observer had noted an appreciable change in the mentality and an increase in the length of the long bones, while in two increase in height only was recorded. Of the eleven patients treated the average age was 17.5 years. In most of the other 116 patients therapy of some type for short periods was occasionally noted, but no evidence was recorded of early diagnosis and consistent treatment.

I have had opportunity of seeing or doing but three autopsies on cretins. One was an infant of two months, in whom no evidence of thyroid tissue was found. Another was 11 years of age, and the third was 41. The 11-year-old boy had a small amount of atypical thyroid tissue in the right side of the neck, and the 41-year-old woman had a cystic pendulant mass developed in the region where the left lobe of the thyroid should have been. The pathologist reported a small mass of atypical thyroid tissue at the base of the cyst. I believe that where no thyroid gland was evident on physical examination some gland tissue would have been found at operation or post mortem, probably of an atypical variety.

From the above data it seems that cretinism is rather common in the Northwest, as well as in Switzerland. Certainly we must agree that hypothyroidism is associated with other endocrine disturbances and that these possess distinct hereditary tendencies. Certainly our pioneers, who came largely from the plains and nongoitrous regions of the East, did not have goiter any more frequently than those of their friends left behind. We are not possessed of information as to the incidence of cretinism in the United States over a very long period, but from personal observation and investigation I believe that it does occur commonly in the goitrous regions of the world and, therefore, we must consider endemic goiter and cretinism closely related and associated, the endemic goiter preceding the cretinism in the family tree. Four or five generations is a long time in the history of the West, but a short time compared with Switzerland, which has existed as a republic since 1292 and where marriages between persons of low mentalities must be a common occurrence.

Evidence seems to support the prophecy that unless we prevent and cure our endemic goiter patients we are going to have an increase in cretinism. The problem, of course, will be to educate the public generally to understand that it is going to be necessary to supplement the food taken by the mother through the giving of iodine and thyroid products not only during pregnancy but during the growth of the child. A careful study of all patients, looking toward the discovery of hypothyroidism and its prevention and cure, is certainly important. Adequate tests for possible hypothyroidism are as important as a urinalysis and should become routine in the study of patients.

I know of cases of hypothyroidism or cretinism where both parents are fairly normal. In a country such as ours, where there is a deficiency of iodine,

unless the mother secures iodine during the embryonic life of the infant there is danger of a deficient child. I believe that all obstetricians should give careful attention to this, and also to the history of the parents as to the possibility of goiter in the family. When obstetricians do this and take the basal metabolic rate of the mother from time to time much will have been done to meet the therapeutic indication in the interest of the child.

CONCLUSIONS

1. Endemic goiter and cretinism are closely allied conditions, with much evidence supporting the theory that endemic goiter continuing untreated through several generations is the father of cretinism.

2. Our public institutions housing defective individuals should be made institutions for consistent study and investigation by physicians, looking toward increased knowledge in this field.

3. To get the most favorable results in the treatment of cretinism:

(a) Prevent marriage of mental defectives and, if they are allowed to marry, sterilize both of the parents. (b) In endemic goitrous territory prevent goiter in the child by treating its parents from babyhood to adult life and the mother during pregnancy. (c) Begin to treat all cretins in infancy and treat consistently, recording carefully all progress at stated intervals and continue treatments during the lifetime of the individual.

REVIEW OF NECROPSIES, MEDICAL SERVICE, LOS ANGELES GENERAL HOSPITAL

By NORMAN CARR PAINE, M. D.
Glendale

TWENTY-FIVE necropsy protocols of patients from the service of John W. Shuman, Los Angeles General Hospital, who died during 1925 and 1926 form the basis of this discussion. Similar summaries and analyses of necropsy findings in relation to clinical data are given at frequent intervals, usually by the pathologist. This report is from the clinician's point of view.

Grouping the twenty-five cases roughly, there were nine where the cause of death was cardio-renal-vascular. These were divided as follows: three, of pericarditis, one of these and one other, mitral and aortic endocarditis, three of generalized arteriosclerosis, one aneurysm, and one chronic nephritis. However, in nineteen of the twenty-five cases kidney abnormality was noted. In seven cases the fatality resulted from pathological conditions in the gastrointestinal canal, two from gastric carcinoma, one from carcinoma of the head of the pancreas, two from gastric ulcers, and two from ulcerative colitis. Two died from pulmonary tuberculosis, and two from brain tumors. There was one instance of pernicious anemia. Sepsis was responsible for death in three cases, one peritonitis, one pyemia following maxillary sinusitis, and one meningitis complicating mastoiditis. In one case the pathologist was unable to assign any cause of death.

The usual comparison of diagnostic impressions with pathological findings gives a false impression. With our exact laboratory and x-ray examinations we have many clinical facts gathered together, but diagnosis is largely a matter of deductions, inferences and the personal equation. The pathologist

deals only with anatomical facts, and often refrains from even expressing opinions. Some conditions are strictly clinical, while others are almost as strictly anatomical.

For example, there were two cases of uremia in the series, one with a nonprotein nitrogen of 300 mgm. per 100 cc. of blood and a creatine of 10, the other with 200 nonprotein nitrogen and 10 creatine. The pathologist described chronic diffuse nephritis in both, and in the first generalized arteriosclerosis as well. Obviously uremia is a clinical condition, not a post mortem finding. On the other hand, of three cases of pericarditis, one with effusion was recognized ante mortem, the other two, as is often the case, were diagnosed only at post mortem. Myocardial failure was the clinical picture in these. The clinician diagnoses chronic myocarditis with decompensation, but the pathologist sees only dilatation and hypertrophy of the heart. In three of the cardiorenal group positive Wassermanns were present, and it was disappointing that the pathologist did not make reference to this except in one of the protocols. If we include one other case in which the cardiorenal pathology was outstanding, ten, or 40 per cent of the twenty-five cases belong in this class. The clinical and pathological conclusions agree in all these cases with the above qualifications.

The gastrointestinal cases comprise 28 per cent. A patient with carcinoma of the pylorus died under nitrous oxide anesthesia before an exploratory incision could be made. The other carcinoma of the stomach, previously reported,¹ had a resection of a large part of the stomach seventeen years before. He had no recurrence of symptoms for sixteen years, but died of inanition and marked anemia with a tiny funnel-shaped carcinomatous stomach 12 cm. long and 7 cm. across at the top. The carcinoma of the head of the pancreas was diagnosed by only one physician. There was absence of free hydrochloric acid in the stomach, and several examiners agreed on a carcinomatous liver, the location of primary growth unknown, with probably chronic gall-bladder disease.

The two dying of ulcer were diagnosed clinically. The first, a man 79 years old, was considered probably malignant, and there was so much tenderness and rigidity that perforation was also diagnosed. Without microscopic sections the pathologist denied malignancy, and the perforation was not complete. The other case was clinically a death from repeated hemorrhages and marked anemia, but pathologically a terminal rupture (2.5 cm. in diameter) caused death. The pathologist described "considerable dirty fluid in the abdomen, but no peritoneal reaction." Of the two ulcerative colitis cases only one was proved amebic. One patient was 71 years old, the other 32. Both had had symptoms for years, but died after one week of acute dysentery.

There were two cases of pulmonary tuberculosis. One of these was a coroner's case; the patient was in coma suggesting a cerebral lesion. He lived only a few hours and was the only case not diagnosed clinically. The other tuberculosis case illustrates a fault which is more responsible for missed diagnoses than any other thing. In his haste the physician

on the genitourinary service was satisfied to establish a genitourinary diagnosis and failed to make a calm, judicial, complete diagnostic examination. This patient was sixty-one days on the genitourinary service, diagnosed as having hydrocele, varicocele, and probable carcinoma of the prostate. He died after sixteen days in the medical ward, but not before examination revealed advanced pulmonary tuberculosis and tuberculosis of the vertebrae confirmed by x-ray.

The two brain tumor cases were in the hospital, one five weeks, the other several months, and neither was diagnosed quickly enough to offer any hope from surgical procedures. The patients were boys of 17 and 19 years. One was variously considered encephalitis, tuberculous meningitis, typhoid (because of a positive widal) and finally frontal lobe tumor. He had a glioma of the left temporal lobe. The other boy was admitted to the contagious disease ward as "meningitis" and was in the hospital for months. He lost the sight in one eye and had a marked papillitis in the other. The diagnosis of brain tumor was finally made, and he was being prepared for operation when he died. The pathologist discovered hemorrhagic glioma of the right cerebellar hemisphere.

The case of pernicious anemia had "the typically negative findings" at autopsy. However, nephritis was a possible cause for the anemia.

The group classed as "septic" contains three cases. The patient with purulent meningitis, following mastoiditis, was in the hospital three hours. The one with pyemia following a maxillary sinusitis of six years' duration, lived two days. He had bilateral pyothorax, multiple lung abscess, and cellulitis of the shoulder. These two, seen earlier, would have been surgical cases. The third case died with acute peritonitis. This man was dropsical, with severe heart and kidney disease. The peritonitis was of undetermined origin. However, there was an abdominal paracentesis a few days before death which either through the wound of entrance or by perforating the bowel might have contaminated the ascitic fluid. This patient also had an unrecognized ulcerative colitis.

One autopsy revealed no adequate cause for death; the clinical diagnosis of dysentery was undoubtedly correct.

In reviewing the complete anatomical diagnoses the failure to clinically recognize and record pulmonary conditions is most noticeable. This is undoubtedly partly due to our noisy wards and lack of private examining rooms. Terminal bronchopneumonias were not diagnosed in five patients, and hydrothorax was missed four times. In some of these the degree of pathological disturbance was insufficient for clinical recognition, and some of the patients were left undisturbed during their last day or two of life for just and sufficient reasons.

The large part played in diagnosis by the x-ray is significant. Four stomach cases, one of tuberculosis, one of aneurysm, one of pericarditis, all told 28 per cent of the series, were accurately diagnosed by the roentgenologist. Blood chemistry done in eight cases was abnormal in only two, the uremias. Electrocardiograms were not essential to diagnoses

1. "Carcinoma of Stomach," John William Shuman, M. D., J. A. M. A., April 10, 1926.

in this series. Stool examination was valuable in six cases, stomach analysis in three. Differential blood count and negative examinations of other kinds led to the diagnosis of pernicious anemia. Routine urine analysis revealed albumen and casts in seventeen of the nineteen which anatomically had abnormal kidneys, and yet the presence of nephritis was only recorded in the clinical diagnosis in one-half of these. This high percentage of nephritis should not be forgotten by those ambitious to foretell the anatomical diagnosis.

The review of these twenty-five records shows that the clinical work has well withstood the searchlight of post mortem examination. The teamwork between the pathological department, the x-ray department, and the medical service in arriving at a correct clinical diagnosis is especially pleasing.

CAESAREAN SECTION IN OBSTRUCTED PELVES*

By R. KNIGHT SMITH, M. D.

AND

T. HENSHAW KELLY, M. D.

San Francisco

DISCUSSION by Charles Harold Lewis, Santa Monica;
John Fruwink, Los Angeles.

IN a pelvis obstructed by any cause whatever, the problem confronting the obstetrician during pregnancy in such a case is the delivery of the child with the least risk to itself and to its mother.

It is certainly true that, with contracted pelves of one sort or another, spontaneous delivery will occur in almost 80 per cent of patients, but it is with the remaining 20 per cent that we have to deal in this paper—the problem of when to do caesarean section.

Caesarean section was first introduced in the pre-antiseptic days, as an operation to be done when all other means, including the patient and midwife, which might bring about delivery, had been exhausted. Naturally the operative mortality was enormously high—50 to 85 per cent—so that it remained an operation to be done only to prevent a woman dying undelivered.

However, when Sanger in 1882 revived the operation and made a reasonable surgical procedure out of it the mortality rate was reduced to a point where the operation not infrequently permitted a patient a better chance of life than any other obstetrical procedure would have done. Therefore it was recognized that we had a procedure which, if carefully used and skillfully done, inherently possessed a low operative mortality and the operation became quite generally used and, as its performance became more widespread, improvements and modifications were added which brought it to its present status.

The most proper use of caesarean section is in patients whose pelves are too small to permit delivery through the natural passages without severe injury or death to the child. The burning question today is, therefore, "What should we consider the indications for a section?"

No one disputes the absolute indication in the patient whose true conjugate is 6.25 cm. or less, but the relative indications are very heatedly discussed. Let us briefly consider the alternatives presenting themselves.

In patients upon whom careful pelvic measurements have been made and the pelves found to be contracted beyond limits where spontaneous delivery may be hoped for the following choice of procedures presents itself: 1. Induction of labor some weeks before the expected date of confinement. 2. An attempt at forceps delivery. 3. Version. 4. Caesarean section.

1. Induction of labor prematurely offers some risk to the child though little to the mother. Spencer says that, among 5647 women delivered at the Maternity of University College Hospital, premature labor was induced for contracted pelvis 113 times with a maternal mortality of 0 per cent and twelve fetal deaths or 10.6 per cent. At the Rotunda Hospital the fetal death rate in induced premature labor was 12.5 per cent. Thus it is seen that in this procedure we lose in the neighborhood of 10 per cent of the children, if not at delivery, by prematurity.

2. If when the patient goes into labor she succeeds in engaging the head in the pelvic brim, and if we know that the pelvic outlet is not an impossible one, it is permissible to attempt delivery by forceps and this is usually successful, though it means a certain risk to the fetus. G. Ritterhaus in 1925 reported a fetal mortality of 3.78 per cent in forceps deliveries in 8.32 per cent of 17,942 deliveries, the mortality rising, the higher the forceps application. However, when the head remains above, and cannot be pushed into the brim after the second stage begins, we feel that the application of forceps to the floating head is not justifiable.

3. In the last-mentioned instance we also feel that an attempt at version and extraction is not justifiable, as we have no assurance that a head can be pulled through last instead of first. Potter has a fetal death rate of 6.27 per cent in versions upon average, normal patients, so that this maneuver would be accompanied by too high a fetal death rate.

4. We believe that in patients with contracted pelves of any degree who have been allowed two hours of second-stage pains, and in whom the head remains above the brim, caesarean section is the operation of choice. Let us consider its mortality.

A. Routh in 1911 published a study of the caesarean sections done by British obstetricians up to 1911 and found a maternal mortality in contracted pelvis of 2.9 per cent when the operation was done with the membranes intact, 10.8 per cent after they had ruptured, and 34.3 per cent when repeated vaginal examinations or attempts at delivery had been made. Holland in 1921 reported 1953 caesarean sections in England for contracted pelvis from 1911 to 1921 and found a mortality of 1.6 per cent when done before labor, 1.8 per cent when done early in labor, 10 per cent when done late, 14 per cent after induction of labor, and 27 per cent after attempts at delivery had been made. The total mortality for the series was 4.3 per cent. Williams reports 253 cases with a rate of 2.45 per cent. De Lee in 1925 reported 330 cases of all sorts with a death rate

* Read before the California Medical Association in General Meeting, at the Fifty-Fifth Annual Session, April 29, 1926.

of 0.6 per cent, using the incision through the lower uterine segment. Spencer in 1925 reported ninety-eight sections done by him for contracted pelvis with a mortality of just over 2 per cent. Thus in these men's hands the mortality averages about 2.63 per cent.

If the operative mortality of caesarean section can be reduced still more it becomes a question as to whether or not the child should not be given more consideration than it is, for there is no doubt that if the maternal and fetal mortality rate in a series of difficult high forceps deliveries are added together and divided by two the result will be a greater combined one than that of well-considered and well-done caesarean section.

The cases presented here were done from 1909 to 1925 inclusive, and were done for the most part after the patient had been given a test of labor with full dilatation of the cervix and the head still floated or where the mother or the child showed evidences of exhaustion before the head had engaged or the cervix had completely dilated in spite of hard labor. A few were elective and were done because of absolute indications or because of previous obstetrical catastrophes in the hands of competent obstetricians. Finally the group which was done because of previous caesarean section is added. These were all a week before the expected date of confinement.

In 4954 deliveries, 1909 to 1925 inclusive, 159 sections were done because of failure of engagement of the head after labor or because of pelvic measurements and past histories that elected caesarean section as the method of delivery. Five patients were sections because of fibromyomata obstructing the birth canal, and three because of cysts which were fixed in front of the presenting part—two ovarian and one intraligamentous. This is at the rate of 32.2 per 1000.

After April, 1924, we began using the low incision, and there are thirty of these operations included in the series. The only death in the series is the patient first operated upon by the low method who died on the fourth day from paralytic ileus. This gives a mortality rate in the series of .59 per cent.

Of the children two twins and one other were stillborn, making the infant mortality rate 1.8 per cent. The single pregnancy was known to have a dead fetus, but also had large uterine fibroids, a small pelvis and a bischial diameter of 7.5 cm., so that caesarean was selected. The twin pregnancy gave no audible heart sounds at time of entrance to hospital, but mother asserted fetal movement and with a small pelvis and breech failing to engage, section was done. Both babies were dead and the cords were macerated. The membranes were unruptured in the patient who died.

Thus we have a maternal mortality rate in this series of .59 per cent, and the general rate for pregnancy which is causing concern in the United States is .8 per cent. If we add to this series those caesareans which were done in this period because the patients had had previous sections, we find eighty-one operations done for this cause, with no deaths of mothers and one stillborn child, a fetal mortality of 1.2 per cent. We put these figures in to show that in patients who have no complications such as

toxemia or hemorrhage the operative risk is very low. Adding these two series together we get a total of 248 cases with one maternal and four fetal deaths, rates of .4 per cent and 1.6 per cent, respectively. This caesarean rate is 50 per 1000.

The operations used were the classical high caesarean in the first 204 cases, and the last forty-four were the laparotrachelotomy as named by De Lee.

Rectal examinations alone are used until we are ready to deliver by one means or another, so that vaginal examinations do not complicate our decisions.

With a possible mortality such as this we feel that many times we are justified in performing a section rather than attempting a problematical delivery.

DISCUSSION

CHARLES HAROLD LEWIS, M. D. (210 Medical Building, Santa Monica, California)—There are several features about the report of Doctors Smith and Kelly which I should like to emphasize. First of all must be considered the fact that the large majority of caesarean operations that have been performed have not been at the hands of such skillful operators. "Sections," like tonsillectomies, are in many quarters considered fair meat for all. Probably many general surgeons might perform the operation in a superior manner, but how often is this technical ability combined with the obstetrical judgment necessary for results to be ideal? I am sure that one of the reasons that the authors are able to report such a remarkably low maternal and fetal mortality is because of their superior obstetrical judgment. In other words while the patient was given a thorough test of labor, yet there was no unnecessary delay nor procrastination, factors which are vital. All statistics of caesarean operations show proportionately much more favorable results where operation was performed without unnecessary examinations early in labor and before rupture of the membranes.

My own practice has been to examine vaginally under aseptic precautions all primiparae regardless of pelvic measure two weeks before the expected date of confinement. If at that examination the fetal head is not engaged (leading point at the level of the plane passing through the tips of the ischial spines) this patient is marked for observation. I say "regardless of pelvic measurements," for in practical pelvimetry the important consideration is not the usual measurement in centimeters but the relation of passenger to passage, of fetal head to pelvis.

This patient is examined one week later and if at that time the head is engaged a normal delivery is expected. If engagement has not taken place observation is continued. In either case, if labor ensues and engagement does not occur by the time the os has dilated to admit two fingers I perform section in preference to the alternative of difficult and prolonged labor and forceps delivery. Perhaps my procedure is a little more radical than that of the authors, but my plea is for accurate obstetrical judgment and prompt section when indicated, believing that thereby lower fetal and maternal mortality will result even in the hands of those less skillful than the authors.

JOHN VUWINK, M. D. (1021 Pacific Mutual Building, Los Angeles)—It is easy to agree with the authors to the effect that a caesarean—preferably a laparotrachelotomy—should be done when disproportion is evidenced by a high head after two hours of second-stage labor. A test of labor is only applicable to the second stage. We do not expect appreciable descent during the first stage.

Disproportion is the one logical indication for a caesarean, whether or not it takes two hours of second-stage labor to prove the dystocia. I do not believe, however, that all high heads, even after two hours of second-stage labor, are caused by disproportion. Certainly we must distinguish between dystocia due to disproportion and dystocia due to maladjustment between the passenger and passages. In the occiput anterior positions we expect lightening, in primipara, before the onset of labor. In the occiput posterior positions we are not disturbed to find a high head. After two hours of second-stage labor, however, we should find that any high head has become definitely engaged.

Because we do have failure of descent because of mal-

adjustment, particularly extension of the head in posterior positions, simple rupture of the membranes will occasionally eventuate in spontaneous delivery. For the same reason version and extraction has a distinct and large field of usefulness, because it is reasonable to believe that the maladjustment is corrected by the turning of the baby, and the smaller diameters of the head may then be guided through the larger diameters of the pelvis.

I believe the conclusion drawn from the figures given are a wholesome argument for clean obstetrics and clean obstetrical surgery.

T. HENSHAW KELLY (closing).—There is very little to add to the discussion of Doctors Lewis and Vruwink except to say that we agree with their statements in general.

In primiparae, in whom engagement of the head in a posterior position has taken place after rupture of the membranes, manual rotation of the head to an anterior position can often be accomplished followed by spontaneous or instrumental delivery. We never try to deliver a primipara by any other means than a section if the cervix has dilated without engagement of the head occurring.

SKIN CANCER OF THE FACE AND NECK

By C. RAY LOUNSBERRY, M.D.
San Diego

ALL that we know of the earliest forms of skin cancer is that it begins as a local mass of abnormal cells of peculiar character. These become activated in some mysterious manner and form a network of cells which invades the adjacent tissue, destroying all normal cells with which they come in contact. The cancer cells spread by direct contact with the adjacent tissue; by the hematogenous route; and by the lymphatic system.

The seriousness of the lesion depends upon the organ which it attacks, its site, and the type of cancer cells found. The lesion may be globular, infiltrative, nodular, tubercular, lobulated, polypoid, cauliflower, papillary, fungus, flat or villous in configuration. Cancer growth may be atypical, not resembling normal tissue or typical in which normal tissue it resembled. Embryologically the growth may develop from any one of the germinal layer, the ectoderm, the mesoderm, or the endoderm, or it may have morphological characteristics of two or more layers.

The blood supply of these tumors is not typical, but is composed of reconstructed sinuses lined by endothelium; thus being constructed by such atypical material it easily breaks down and hemorrhage and ultimate complete necrosis follows. When a patient reports for diagnosis and treatment we can go into the subject with much more confidence after we know the type and class of lesion, including the pathogenic changes in surrounding tissue.

A type of tumor of particular interest to the dermatologist is one which although benign at the time ultimately becomes malignant. Benign, encapsulated tumors cause little worry, but a metastatic growth correctly diagnosed-epithelioma always is something serious. When examination shows a piling up of cells on top of normal epithelium we must begin the work of eradication. So many patients ask for treatment too late. Why is it so difficult to educate the public about prevention? I feel that every physician who notices any form of hypertrophy of cells upon apparent normal epithelium should advise immediately with a dermatologist with the

hope of thereby diminishing the mortality of cancer. The cure of skin cancer, of course, is in drastic removal of growth while it is still in the benign stage.

The type of cancers that concerns us most are those which consist of an abnormal production of basal or squamous cell epithelium. They manifest themselves by epithelial proliferation in the upper layers of the epidermis and corium, and are usually superficial in character. Their growth is an out-pouching process in which normal cells are replaced by cancer cells. A single superficial ulcer will form which later fuses into another undermined layer. This continuous degeneration produces the necrotic-like appearance which distinguishes rodent ulcer. The border of the ulcer is rolled, hard, and slightly nodular, and is composed of basal cells. The tendency to metastasis in this type of growth is almost nil, but sometimes we see signs of metastasis in them as we do in the squamous cell variety. Most European authorities maintain that all rodent ulcers are superficial in type. It is because of these fundamental characteristics that this variety is amenable to successful treatment.

The best method of treatment is by the complete destruction of the abnormal growth. Excision with an electric cautery knife, electrocoagulation by the diathermic method, the quartz ray and radium are the agencies used at the present time.

Depressed or atrophic scar-like cancers are often found associated with a generalized scleroderma and are often found among patches of extensive keratoses. This form is characterized by depression without a great deal of infiltration. They usually appear in the frontal or temporal region above the level of the eyes. Their growth is slow, and treatment of this type of cancer progresses just as slowly. The periosteum of the frontal and temporal bones are many times involved when the growth penetrates the bony structures. The prognosis for complete recovery is doubtful. Radium seems to be the only treatment in this form of cancer.

Another type of skin cancer is the lupus vulgaris-sloughing variety. The lesion at first is about the size of a grain of wheat, and may be necrotic from the beginning or hard and nodular in consistency, or show no sign of necrosis or elevation. The epidermis may be first involved, and then the deeper structures may ulcerate, thus producing the lupus vulgaris form. This form is often diagnosed as a lupus.

We often come in contact with the hypertrophic form of growth. This group is characterized by an out-pouching of epithelium under which is an area of sloughing, necrotic tissue. The odor from this form is very noticeable and they grow rapidly, involving all structures with which they come in contact. They resemble a head of cauliflower.

The morphea-like type is a form which is very rare. They occur as flat patches of ivory or yellowish color. This variety may be infiltrative in nature with rounded lilac-colored borders. These areas are found on the face and neck and are wrongly diagnosed as a circumscribed scleroderma, because they assimilate a morphea. This form is of superficial nature.

Skin cancer of the face and neck can be divided

into the deep group and the superficial variety. The deep group begins as a subcutaneous involvement, affecting the deeper structures while the superficial epitheliomata manifests themselves on the epidermis in the form of scaly dermatoses. All types come under one of these groups.

The point I wish to emphasize strongly in the treatment of skin cancer of the face and neck is the necessity for an early diagnosis. This usually falls to the lot of the general practitioner. He is the one who should warn the patient of danger and should preach the gospel of cancer extinction. The outcome depends largely upon whether or not the condition is diagnosed before metastasis takes place.

Successful treatment of skin cancer depends upon such factors as resistance of the individual, the type of lesion, the duration of the disease, the former treatment, as well as the age of the patient. After a complete history has been taken and after definite diagnosis has been made, then the overgrowth is destroyed by diathermic coagulation. Following this procedure the ultra-violet rays are used to stimulate granulation, and also to aid in the process of elimination of by-products which are harmful to the growth of new cells. The action of the rays is an aid in the production of a better cosmetic effect in the resultant scar. If the area is too extensive and if the periosteum is involved plastic surgery should be utilized.

In conclusion I wish to state that nothing has been discovered which surpasses radium in the treatment of skin cancer of the face and neck, especially if other physical agents, including high frequency, carbon dioxide snow, the water and air-cooled ultra-violet ray are used to supplement it. Finally the early diagnosis and the early treatment of benign lesions found so often on the face and neck may cause the disappearance of this dreaded disease. Let us all enroll in a society with the motto, "The early destruction of any form of hypertrophy."

The medical student is required to devote five years of his life to special study before he is entitled to practice as a fully qualified doctor. Now a period of five years is a big slice out of one's life: the average expectation of life at birth for the people of these islands is fifty-five years, and thus the minimum medical curriculum represents the eleventh part of that expectation.

These five years—say from 18 to 23—are some of the best years, perhaps the best, of the student's life. It is at least unlikely that the years succeeding them, bringing as they inevitably will serious responsibilities and (after the meridian) progressively waning powers, will provide him with a fuller measure of happiness than he is capable of snatching from those previous five years of student life.

Let not the student therefore look upon these years of probation as a long-drawn-out period of irksome bondage, from which release into joyous freedom is only to be achieved by successfully surmounting a series of disagreeable obstacles in the shape of test examinations. Let him rather count each individual day of his curriculum as part of the great gift of life at its most entrancing phase. Seeing that, once passed, it never returns, let each day be lived and enjoyed to the full.—*The Medical Press and Circular* (London).

The total number of known lepers in the United States is somewhere in the neighborhood of 300, and it is probable that not far from an equal number remain unrecognized.—*Med. Times*.

CLINICAL NOTES, CASE REPORTS AND NEW INSTRUMENTS

ACRODYNIA

CASE REPORT

By J. W. ROBINSON, M. D.
Los Angeles

(From the Diagnosis Division, Los Angeles County Health Department)

EDITOR'S NOTE: A. J. Scott, Los Angeles, in the July, 1926, issue of CALIFORNIA AND WESTERN MEDICINE in his article on "Acrodynia" also reports a case.

ACRODYNIA is probably more frequent than the limited number of reported cases would indicate. Possibly most of the cases are not recognized.

In November, 1920, Byfield,¹ reported a case. The masterful article by Bilderback² gives a rather complete bibliography. An editorial in the *Journal of the American Medical Association*, October 17, 1925, calls attention to this disease; and Rodda³ reports seventeen cases.

The following patient exhibited no special features, but a report is made thereon in order to call attention of more of our colleagues to this disease.

B. S., a 6½-year-old girl, had an onset during November, 1926, exhibiting general malaise with anorexia, indefinite pains in the stomach and transitory pains in the joints. These symptoms had followed some dental work. Her physician concluded that the symptoms were due to absorption of toxins, and the child was referred to a dentist who extracted one of the filled teeth. The symptoms continued with the addition of perspiration and a burning feeling in the hands and feet.

The child was now taken to another physician who stated frankly that he did not know what the condition was and suggested that she be taken to a hospital clinic. In January this was done and, because of the drowsiness and prostration, a provisional diagnosis of epidemic encephalitis was made. Further observation, including a lumbar puncture and examination of the spinal fluid, convinced the hospital physicians that the child did not have epidemic encephalitis.

After a few days the child was allowed to go home without a definite diagnosis having been established. The eruption on the hands and feet was diagnosed as prickly heat.

I was asked to see this child on March 8. I found her with typical symptoms of acrodynia. The hands and feet were intensely red with marked desquamation. There were a few vesicles around the fingers and on the toes. To the touch, the hands and feet, forearms and legs, were extremely cold. The degree of weakness was extreme and there was a fair degree of photophobia. Perspiration was so extreme the mother stated that she could hardly change the bed clothes frequently enough to keep them dry. There was a marked degree of anorexia. The child complained of various pains. These were transitory and referred to various parts of the body. The diagnosis of acrodynia was made.

The child was placed on a rather liberal diet, with the addition of cod-liver oil and orange juice. Within two weeks' time there was an improvement, followed by a

1. Byfield, A. H.: *American Journal Diseases Childhood*, 20:347, November, 1926.

2. Bilderback, J. B.: *Journal of the American Medical Association*, 84:495, February 14, 1925.

3. Rodda, F. C.: *American Journal Disease of Childhood*, 30:224, August 1925.

slight relapse in the condition of the hands and feet. However, this lasted only a few days. At the present date the child has apparently made complete recovery except that full strength and lost flesh has not been fully regained. Whether a well-regulated diet with an adequate supply of vitamins has caused the improvement is difficult to determine. The duration of the illness was such that she might have reached that stage where improvement would have occurred under any régime.

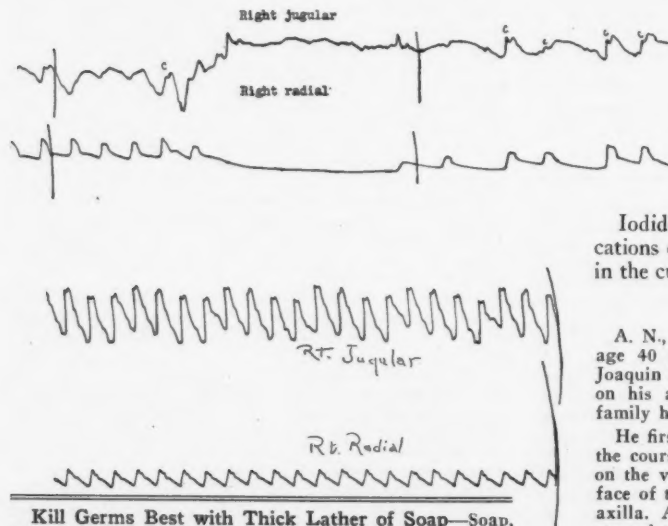
There are many features about this disease that parallel pellagra, rickets, and beri-beri. The suggestion that acrodynia may be a nutritional disorder with a possible insufficient supply of vitamins, seems worthy of careful investigation.

EPHEDRIN IN ADAMS-STOKES SYNDROME

By MERRILL HOLLINGSWORTH, M. D.

Santa Ana

Ephedrin would be expected to have the same effect on Adams-Stokes syndrome as epinephrin, except that the influence of the former should be more lasting. Subjoined is a polygram of a woman, age 68, who had been having an average of three attacks every ten minutes, which prevented her sitting up. Barium chloride was given, but no effect was noted with the recommended dosage 0.03 gram t. i. d. On giving ephedrin, one 0.05 gram capsule by mouth, the attacks ceased within thirty minutes, and did not recur for thirty-six hours. On taking one capsule each morning she was completely freed from the attacks, and was able to resume her household duties. After taking the drug three weeks, it was withheld, but the attacks recurred in forty-eight hours, so its use was resumed. It was interesting to note that the feeling of trembling in the knees that accompanied the administration of ephedrin the first few days disappeared on its continued administration.



Kill Germs Best with Thick Lather of Soap—Soap, according to investigators in the United States Army Medical Corps, is the most valuable ingredient of any of the dentrifices in relation to the prevention of infection, reports *Hygeia*. When the soap is applied as a thick lather and allowed to remain for a considerable time the most efficient antiseptic effect of the soap is secured. Immediate rinsing reduces the germicidal action to about one-fifth of the usual activity.

The use of ordinary toilet soap or dentrifices containing soap, and most powder and paste dentrifices generally contain ingredients of a soapy character, affords especial protection against infection with the organisms causing Vincent's angina.

CUTANEOUS SPOROTRICHOSIS

CASE REPORT

By PERCY B. GALLEGOS, M. D.
Stockton

SPOROTRICHOSIS is defined by Sutton as an infectious, parasitic disease, due to a species of sporothrix, and characterized by the formation of multiple abscesses in the skin and subcutaneous structures, and, occasionally, in one or more of the internal organs.

The first description of the condition was made by Schenck in 1898. Since that time several cases have been reported in both the United States and Europe.

The characteristic picture is one of a string of subcutaneous nodules, which develop along the course of the lymphatics, most frequently on the extremities or face. After a time these soften and form painless abscesses. These in turn perforate, leaving fistulas or ulcerated areas discharging a purulent material. The lesions are often mistaken for those of syphilis or tuberculosis. They rarely heal without treatment.

The disease is caused by an aerobic fungus, the *sporotrichum schenkii* of Smith. It has been recovered but a few times from the lesions in man, and has been isolated occasionally from the blood of those suffering from the cutaneous form.

Several species of sporothrix have been described; but recent work tends to show that some of them at least are identical with *s. schenkii*.

The microscopic picture resembles the lesions of cutaneous syphilis or tuberculosis.

Lesions similar to those described above which do not yield to ordinary treatment should be investigated in regard to sporotrichosis infection. An attempt should be made to identify the causative organism by smear or culture. Tuberculosis, syphilis, and blastomycosis should be ruled out.

Iodides internally are specific. Local applications of the tincture or Lugol's Solution aid in the cure.

REPORT OF A CASE

A. N., Italian, male, ragpicker and paper sorter, age 40 years, reported to the clinic of the San Joaquin Local Health District complaining of sores on his arms of ten months' duration. Past and family history were not remarkable.

He first noticed a nodule on the left wrist, and in the course of a week or so several more appeared on the volar aspect of the forearm and inner surface of the arm three-fourths of the distance to the axilla. After a time some of these broke down and started to discharge. When seen the condition was progressing.

On examination he was found to have a string of the characteristic lesions on the left arm and forearm. Some were subcutaneous nodules, while others had broken down and were discharging through the skin.

The Wassermann was negative. An attempt to isolate the fungus was unsuccessful.

The patient was given sodium iodide gr. xx t. i. d., and the lesions painted with tincture iodine. In the course of a week marked improvement was noted and in a month healing was complete.

JAMES H. PARKINSON

A MEMORIAL TRIBUTE*

By WILLIAM ELLERY BRIGGS, M. D.
Sacramento

ON July 22, 1926, death called one of our most noted and distinguished members, Dr. James H. Parkinson, at his summer home in the American River Canyon. The departure of Doctor Parkinson will be felt as a personal loss by every member of this society.

Doctor Parkinson was born in Dalkey, Ireland, October 28, 1859. At the age of 20 he was licensed to practice medicine by the King's College of Physicians, and a year later he became a member of the Royal College of Surgeons of Ireland. He spent about two years in the British merchant marine service as surgeon. During these years he visited many of the cities of Asia, Africa, South America, and the United States.

At the request of Dr. G. G. Tyrrell, he came to Sacramento and began the practice of medicine. Three years after his arrival in Sacramento he married Mary W. Bonte, daughter of Rev. J. H. C. Bonte, who was for many years secretary of the Board of Regents of the University of California. Mrs. Parkinson died in 1903. One son died in early youth and one son, Jack, and three grandchildren survive him.

The doctor's life was so intimately identified with the activities of the Sacramento Society for Medical Improvement and the state society that, when one contemplates the history of these societies during the forty-four years of Doctor Parkinson's residence in this state, one naturally thinks of the activities of our distinguished member.

The doctor became a member of our local society immediately upon his arrival in Sacramento and was soon elected its secretary. Later he served as president for two terms. In 1884 he joined the state society. He was also its secretary and was elected president in 1910. He was an active member of the Council after the reorganization of the society and was president of this body during the past four years.

As an evidence of his unceasing interest in society activities, I might mention the doctor's working over matters of the Council when he was in bed suffering a year ago, in order that his duties as councilor should be in perfect shape. Most men in his condition would be spending a great deal of their energy in self-pity or repining at fate.

When the standard of medical journalism was at a low ebb in California, the doctor started publication of the *Occidental Medical Times*. This work was done without expectation of personal gain, but was cheerfully carried on in the interest of the medical profession. After twelve years of arduous effort and much financial loss, he relinquished the publication. The files of this journal contain a worthwhile record of the progress of medicine during the years of its publication.

He was a member of many civic societies and

gave freely of his time to further the best interests of his city, state, and country. He was vestryman of St. Paul's Church for forty years. He was city physician for a number of years, and was a member of the State Board of Health and vice-president of that board for seven years.

Besides Doctor Parkinson's unusual activities in medical organization and education, he gave freely of his time and energy to all measures toward civic betterment. He was one of the most ardent workers in the creation of the present excellent charter under which Sacramento is now governed.

His indomitable will and pertinacity were exhibited in a high degree when the doctor almost forced himself into the service of the Government at the beginning of the war. In order to enter the service he had to use strategy and persistence on account of his age. He entered training camp before war was declared and returned to his practice after hostilities were ended. The financial loss, the hardships of camp life, the loss of practice apparently caused no regrets. His only regret was that he was not allowed to reach the battlefields of France.

The same courageous spirit kept him at his usual occupations, the practice of medicine, the scrupulous attention to his official duties as councilor and the arduous work of a member and vice-president of the Sacramento Chamber of Commerce. All of these duties were carried on for two years without his letting his closest friends know that he was suffering from a fatal disease that would soon terminate his earthly existence.

It is the unanimous sentiment of the members of this society that this society has suffered and the state has suffered a great loss in the death of Doctor Parkinson. The medical profession will greatly miss his stimulating influence and his interest in all that tends to raise the standard of medical practice and the usefulness of medical men.

As the great majority of us stroll along the Road of Life we see the monumental mile-stones erected by a great man. And as we sit by the roadside, resting and watching the race of the multitude, we see this same man forging far ahead and passing all others—looking forward to that goal of helpfulness to humanity. And, sometimes, as we tire at the foot of the mountain weary of carrying our burdens, we see this untiring worker picking up the burden of others and trudging on to place them properly at the destination and returning again to assist another group to carry on.

He did these things entirely unselfishly, and his greatest work was for the improvement of the health of the people through his work in the medical societies and in the work in his own community.

One of the greatest lessons taught by the life of Doctor Parkinson is that of unselfish devotion to those among whom and with whom he worked, and in his passing we should better realize our own responsibilities, carry our burdens more uncomplainingly and strive to better understand and emulate his unselfishness.

* This biographical sketch was read before the second meeting of the House of Delegates at its Fifty-Sixth Annual Session, April 27, 1927.

- BEDSIDE MEDICINE FOR BEDSIDE DOCTORS -

An open forum for brief discussions of the workaday problems of the bedside doctor. Suggestions for subjects and discussants invited. Useful extracts from letters will be published.

OTITIS MEDIA: WHEN IS PARACENTESIS INDICATED

Editor's Note: "Otitis Media" as here considered implies an inflammation of intensity sufficient to produce a "discharging ear." In former days, with many of the laity, and even with some members of the medical profession, a discharging ear was looked upon as a beneficent measure, by means of which nature safeguarded the afflicted individual from a vast amount of unnecessary pain, and not infrequently saved such a patient from grave intracranial complications. In the comfort of seeing the patient free from intense pain, and absolved for the moment from the menace of serious complications, members of the family and the physician heaved sighs of relief; and having left nature to follow its course, with spontaneous drum perforation as a result, congratulated themselves that the worst was seemingly over. The indirect cost exacted from many patients who went through this experience, such as the impairment of function in a sense organ which is so directly concerned with the economic efficiency and happiness of the individual, and the actual cost in time, money and comfort from nursing a diseased ear that might discharge more or less, throughout the whole lifetime, were for the moment presumably forgotten.

Happily, in recent years this mixture of a mistaken understanding of the significance of inflammations of the middle ear, with its possible far-reaching consequences, and of a somewhat fatalistic acceptance of this disease process, has given way to more rational viewpoint. As a consequence, the mortality from middle ear inflammations, both acute and chronic, has been very considerably lessened; and in corresponding degree, what might be termed the time span of the disease has likewise been greatly cut down.

The advent and application of aseptic principles has been responsible for much of this improvement.

Nevertheless the "when to do the paracentesis" requires oftentimes a keen insight of the nature of otitis media, as well as of each such patient's individual condition and resistance.

The discussion of these problems by the contributors on this subject should therefore be of real interest.

George A. Briggs, Sacramento—I believe the rational treatment of an abscessed ear can be put in one word, drainage, the earlier the better. A prolonged suppuration process in the ear must necessarily produce similar changes in the lining epithelium and chain of ossicles to those seen in chronic nasal sinus disease (hyperemia, swelling and even polypoid degeneration). These are to be feared far more than changes in the drum membrane produced by a clean incision or even by repeated incisions.

In the presuppurative stage when the drum membrane is depressed and dull with beginning exudation in the middle ear with hyperemia at margins and along malleus handle, it is possible to abort the process by inflation. In children of 3 or 4 years a pipette of cold water in the pharynx will cause a child to swallow when inflation can generally be accomplished. If the tube be too greatly swollen to allow the passage of air, paracentesis will probably be indicated in a few hours. I feel that as soon as a definite bulging can be detected an incision is

indicated even in those rare cases where the pain or fever are absent.

Occasionally a case is seen where the middle ear is filled with turbid serum with a slight fullness of the drum membrane. Such cases, when drained, generally make a very quick recovery, in contrast to the case where procrastination has been the principal treatment. When a child has had a suppuration process in one ear for three or four days and a beginning suppuration in the other ear, paracentesis of both often cures the last infection earlier than the one of longer duration. Such cases teach us that early drainage is by far the most important element in treatment.

Harold A. Fletcher, San Francisco—In discussing the above problem it is necessary, first to understand that we are discussing only acute otitis media, and secondly, to differentiate between the two main types of acute otitis media, namely, (1) acute serous catarrh and (2) purulent otitis media.

In acute serous catarrh we are dealing with a noninfectious congestion of the membranes of the eustachian tube middle ear and probably mastoid, with the formation of a fluid like a transudate in the middle ear cavity.

In otitis media acute purulent we are dealing with an infection of the membrane lining the middle ear and mastoid, with a formation of pus in these cavities, which is unable to be drained through the swollen eustachian tube.

There is a period in some cases of purulent otitis media in which the first twelve or twenty-four hours show findings similar to acute serous catarrh, namely, slight mild pain, moderate injection of the drum, and even a very slight bulging. The treatment during this time of either condition might be mild inflation by use of the Pollitzer bag, which may abort the acute purulent type and might clear up the acute serous type without paracentesis.

In by far the majority of cases of acute purulent otitis media the onset is far more rapid with general symptoms of infection and locally rapid thickening and infiltration of the drum and rapid formation of seropurulent fluid under pressure, causing pain and a bulging of the drum, the above taking place in the matter of a few hours.

The moment the diagnosis is made that we are dealing with an acute purulent otitis media with formation of infected material under pressure in the middle ear, as evidenced by a bulging of the drum, a paracentesis should be made.

The reasons for this are sometimes not wholly understood. The purpose is not only to drain out the infected discharge to keep it from being pushed back into the mastoid process, but also—and this is of the greatest importance—to relieve the pressure on the inflamed membrane surfaces themselves. This

pressure, in a closed cavity on infected, swollen and even ulcerated surfaces over the labyrinth, the sinus and the floor of the brain is one of the most dangerous elements. No one can tell when these ulcerations are going to become deeper and cause serious complications.

The only chance for the re-establishment of circulation to care for these lesions is to release this pressure. The sooner this is done by paracentesis the better. There can be no excuse for procrastination in opening an ear drum. Procrastination should come under the head of "prayerful treatment," and has been, and will in time become more so, the cause of malpractice suits.

Another reason for early paracentesis is that delay often means the organization of the products of infection in the ear with adhesions and tendency to deafness far greater than when the drum is opened.

Every physician, and particularly every pediatrician, who is without the services of an otologist should be able to tell whether the patient has a purulent otitis or not, and when in doubt he should be able to perform the simple operation of paracentesis immediately.

Karl F. Pelkan, San Jose, California—With infants and children, acute otitis media is an ever present possibility; it accompanies chiefly the upper respiratory infections and the exanthemata, but may occur secondary to any infectious disease. Its diagnosis, even in the very young, offers no difficulty. Fever is the most constant symptom. In infants pain is absent in a certain number of cases, or, because of inability to localize, may be shown merely by general irritability and sleeplessness. The otoscopic examination, which should be carried out routinely in all febrile disturbances in childhood, quickly settles the point.

The principal difficulty experienced in practice arises from uncertainty of the proper therapy. Opinions vary. There are those who demand early and, if necessary, repeated incision of every ear drum showing hyperemia or giving evidence of pain however slight; others prefer to treat expectantly to the last possible minute and rather take the risk of complications than perform what is deemed a premature and unnecessary paracentesis. There are, no doubt, some sound theoretical reasons on both sides. The frequent, unnecessary incision and consequent scarring of a vibrating membrane, the function of which depends on its delicate structural peculiarities, can do no good. The continued high fever, pain and danger of complications of an inner ear filled with pus is still less desirable.

I believe that a rational middle way can be found at the bedside which takes into consideration both contingencies. It is of necessity based chiefly upon the recognition of the state of things at the membrane and in the inner ear. Chiefly, I said, for the clinical symptoms of temperature, and pain must also be taken into consideration. The physician should be able to differentiate three simple conditions: he must be acquainted with the appearance of the normal ear drum, he must know the appearance of an infected ear drum without pus behind it, and

he must be able to recognize a distended drum. Differentiation of these conditions is aided by removal of all cerumen from the external canal and by using as far as possible the same magnification of otoscope and the same size of speculum.

Otitis media should be treated medically unless paracentesis is very clearly indicated. The medical treatment consists of increasing elimination by bowels and skin, and the local application of an analgesic such as 10 per cent carbolyzed glycerin and hot compresses. The ear is examined daily for evidences of bulging. Most cases of middle ear infection in infants and children subside under this régime. I am not convinced that early incision of all infected ear drums lessens the danger of mastoiditis or other complications.

Paracentesis seems to me to be indicated:

1. When definite bulging of the membrane is present.
2. When questionable bulging, accompanied by severe pain and fever, does not yield in two or three days to medical treatment, or when such an ear cannot be observed daily.
3. When sudden stopping of discharge from an ear is followed by increased pain and temperature.
4. When otherwise unexplained cerebral symptoms or mastoid pains occur in the presence of a reddened ear drum.

It is my opinion that the majority of cases of otitis media in which paracentesis is performed would subside under expectant treatment. There is now a tendency among pediatricians to avoid paracentesis in infants unless very urgently indicated, since spontaneous rupture, which occasionally occurs under the conservative plan of treatment, apparently heals as rapidly and with the same final result as an incised drum.

Donald Cass, Los Angeles—Treatment of otitis media, when the diagnosis is established, depends entirely on whether or not the drainage from the middle ear through the eustachian canal is maintained at all or not. The only indication for paracentesis is in case the drainage through the natural channel is blocked, usually due to swelling of the membrane lining the eustachian canal. This is shown in the physical examination by bulging of the ear drum, which can be seen readily on otoscopic examination.

Treatment of otitis media is either expectant or radical. In cases where the otitis is merely an extension of a coexisting inflammatory process in the nose and pharynx, and the eustachian canal is not completely included, treatment is expectant, that is, by glycerin and carbolic drops in the ear with hot compresses and treatment of general condition, and nasopharyngeal process. When there is a reddening of the drum and a dulling of the surface it is my custom to see the patient at least twice daily and at the first indication of bulging to make an incision through the drum.

Routine examination of children in whom there is a nasopharyngeal inflammatory process present shows that a great many children who do not complain of pain in the ears, and whose temperature is

fairly normal, show a reddening of the ear drum and a lack of light reflection on the glossy surface. These cases are not subjects for paracentesis unless there is a definite bulging.

There seems to be a great apprehension among doctors who do not see a great many cases of inflamed middle ears that brain abscess and other very serious complications are easy to stumble into, but it has not been my experience, with very small children especially, spontaneous rupture of the drum occurring at an early date, automatically providing drainage for the accumulated pus in the middle ear. If careful otoscopic examination had been made in those cases bulging would have been seen prior to rupture.

When there is some slight edema about the ear over the mastoid process, together with large cervical glands and a discharge which becomes less and more at various times, when the temperature is more or less septic, indicating that drainage is not sufficient through an existing perforation of the drum, I believe it good surgery to enlarge the pre-existing hole.

Treatment by irrigation, in my estimation, is not a very good idea unless there is some active indication for it, such as infection by bacillus pyocyaneus. Gently remove coagulated discharge from the external canal or promote drainage by removing other debris, blood, etc., collected in the external canal. Irrigation itself does not reach through the ear drum into the middle ear. If it did I believe it would be deleterious to the structure of the ear and possibly damaging, and as all that is to be desired is adequate drainage of the middle-ear chamber, I believe this could be obtained best by a careful cleansing of the external canal daily and the administration of hot compresses.

In the case of otitis media where the ear has discharged freely and still the patient does not seem to be improving, it has been my practice to remove the adenoid tissue without any anesthetic in very small children, merely using the adenotome quickly, and in most cases the patients do not complain that it has been a very painful operation. If it is needed a small amount of anesthetic can be used, but I have found that the shock is very insignificant and the patient greatly benefited by merely removing the adenoid tissue and giving the eustachian orifices a chance to open up and improve the drainage from the middle ear through the normal channels into the nasopharynx. This, however, is a rather radical procedure and, while I practice it on some cases, I do not advocate it for general use.

Intellectual Learning—Learning things because of curiosity without reference to the use of that knowledge is really one of the largest normal activities of man. Knowledge-getting because of curiosity is analogous to food-getting because of hunger. One wants the food when hungry whether he knows anything about its functional value or not. The hunger is nature's way of ascribing value to things that the man needs. Equally, the healthy mind wants to know the things that appeal to the mental appetite without care at the time as to their practical application. This knowledge-hunger is nature's method of ascribing value to things that the man needs—when he is too immature or too stupid to know what he needs. Such strong and continuing instincts impel only to things that are on the whole useful and necessary.—Bobbitt: *The Curriculum*.

EDITORIALS

RECENT LEGISLATION—PROSPECTIVE AND ATTAINED

The California legislature of the year 1927 convened in January and closed its sessions toward the end of April. Following the precedent established by previous legislatures, it considered several thousand proposed additions to the statutes designed for the better guidance of the citizens of California; and actually enacted about two thousand of the measures. These were all passed to the Governor of the state, he to determine which he would have become laws in our civil and penal codes through the endorsement of his signature; and which he would veto either directly, or through nonsignature (pocket-veto).

The members of the medical profession, as law-abiding citizens, had only a casual interest in the great majority of these proposed laws. Such of the measures as had to do with public health interest—and that term is here used in its broad application to all measures affecting the health and associated interests of either the laity or the medical profession—should be of interest to physicians, and particularly to the members of the California Medical Association.

At the time of this writing, Governor Young is still giving many of the proposed laws which were submitted to him his consideration. Mention will be here made of some of the proposed statutes, the fate of which is now known.

Comment should first be made of the fact that this year, through action of the Council, witnessed a change in the procedure of the Association toward prospective legislation. A decade has practically passed since the state health insurance initiative was before the voters of California. That proposed measure received much attention in professional and lay circles for practically a year or more before its appearance on the voting-sheets. Almost at the last moment, in an eleventh hour effort, as it were, it was decided that the major work involved in the fight against that proposed legislation should be given over to a newly formed organization, composed largely of members of the medical profession and known as the League for the Conservation of Public Health.

That society made an heroic fight and aided greatly in defeating the health insurance initiative. In appreciation of its effective work at that time done, the legislative program of our Association was largely left in the hands of the colleagues who were also identified with the League.

This last year, however, the Council decided to return to its old plan of a separate legislative committee of the California Medical Association. Such a committee, consisting of Dr. Harlan Shoemaker,

chairman, of Los Angeles, and Drs. Joseph Catton, San Francisco; Michael Creamer, Los Angeles; Junius B. Harris, Sacramento; and Robert V. Day, Los Angeles, was duly appointed, and, much as happened ten years ago, it also went into action in what was almost an eleventh hour campaign.

It is gratifying to be able to give credit to this committee for its efficient service. It performed the work in the same splendid fashion as had been done by the League's committees during the recent years.

The four thousand members of the California Medical Association should be interested to know somewhat more in detail concerning some of the legislative problems which confronted the Committee on Legislation. For that purpose quotations will be made from some recent correspondence with the chairman of the committee. Doctor Shoemaker, the chairman, among other things, stated:

There were introduced into the Senate fifty-seven bills and into the Assembly sixty bills that affected the practice of medicine in the state of California. Some of these bills were introduced by the State Board of Medical Examiners and the State Board of Pharmacy, some by welfare organizations outside the state of California. A great number were introduced by various cults and some by civic organizations. The bills affecting the practice of medicine, introduced by the State Board of Medical Examiners, were reviewed by the Legislative Committee and endorsed. They were represented through Dr. Charles B. Pinkham, secretary of the board, and Dr. Junius B. Harris of Sacramento and Mr. Frank M. Smith of Los Angeles. These bills were promptly passed and very promptly signed by the Honorable C. C. Young, Governor of the state of California. You must appreciate that time is the essence of all contracts; in other words, the bills were passed and signed early in the calendar of the legislature.

A few bills were passed and signed by Governor Young, that had met defeat under Governor Richardson's administration, one in particular making it a misdemeanor to use the title "M. D.," unless so licensed by the state of California.

The Pure Milk Law, Assembly Bill 306, which practically eliminates raw milk in the state of California but does not interfere with certified milk, which is also raw milk, was passed.

The annual tax for doctors' certificates in the state of California, which was reduced to \$1 instead of \$2, was passed and signed.

Some bills were amended. The Cosmetology Bill was amended to exclude such drugs as carbolic acid and bichloride of mercury. The Pharmacy Bill, requiring that every owner of a drug store must be a licensed pharmacist and that drugs could only be dispensed by a licensed pharmacist was amended. This would have worked a great hardship on the country doctors.

Senate Bill 342, making failure to report defective hearing a misdemeanor, was robbed of its sting.

Assembly Bill 1261, giving the naturopaths the license to practice medicine and surgery and also making a separate board, which for the price of \$25 by anyone so applying would have allowed such an individual to practice medicine and surgery in the state of California, was defeated.

Assembly Bill 1214, taking the subject of Orthodontia out of the dental schools and placing it in the medical schools, adding to the overcrowded condition of the medical schools and crippling the dental schools, was defeated.

Senate Bill 851, and Assembly Bill 773, known as the optometry bills, were defeated.

The County Hospital Bill, opening all county hospitals and hospitals where they have Civil Service, in other

words making them accessible to all methods of practice without supervision, and without regard to adequate preliminary education and professional training, as a prerequisite for this right, was defeated.

The Crippled Children's Bill was greatly changed, taking it out of the hands of the welfare division of the state of California and placing it where it should be, in the hands of the State Board of Health.

Senate Bill 60, that came close to the hearts of doctors practicing industrial medicine, passed the Senate with one dissenting vote, but was defeated in committee of the Assembly. Senate Bill 60 allowed the cults to practice industrial medicine, and was very properly defeated.

The members of our Committee on Legislation have not been backward in giving to the officers and members of the component county medical societies much of the credit for the successful results above but briefly enumerated. The thanks of the Association are extended to all who aided in the important work which confronted organized medicine. The end-results attained were worthy of the energy and time given by these many loyal colleagues. Their generous aid should stimulate all members of the medical profession to take a keener interest in these matters in the future.

Let no members of the California Medical Association feel, however, that the battle has been permanently won. Such is not the case. Today, as never before, the scientific and economic standards of organized medicine are menaced from many directions. Sometimes these antagonistic forces emanate from well-meaning but not far-seeing individuals and organizations. Not infrequently they have their origin with those who stand for low standards of professional education and training, or with persons of commercialistic or baser motives.

No matter from what source coming, if the efforts would act in detrimental fashion to the highest and best public health interests they should and will be opposed by organized medicine. To that viewpoint and line of action we are all committed, and to that policy we intend to remain firm.

VARIOLA STATISTICS FOR 1926

In this day of enlightenment, and of a civilization of which the Caucasian race is everywhere seemingly most proud, it would be logical to conclude that a scientific fact would commend itself to practically all those persons who had intelligence sufficient to understand the basic hypotheses having to do with the fad in question, and breadth of vision to comprehend the statistical and other evidence having to do therewith.

Jenner in 1796 proved the efficacy of cowpox inoculation, through vaccination, and made it possible for the world to free itself from one of its most dreaded scourges. The carefully compiled and accurate statistics of European and American armies, both in times of peace and war, since the time of Jenner, should convince the most skeptical of the value of vaccination as a preventive of smallpox.

Many persons, however, probably as a result of theories of their own, or which they have accepted from others, seem somewhat reluctant to give the experience figures of vaccination which have accumulated since 1796, that value which practically all well-trained physicians attach thereto.

Osler states that for the United States in 1904,

there were 25,106 cases of smallpox. In 1926 the smallpox morbidity totaled 41,643 cases in our own country.

Among the states, Indiana led with 3571 cases; then came Florida with 2890 cases, and third on the list was our own state of California with 2794 cases. Washington followed with 2413 cases.

Rhode Island and Vermont, however, where strict vaccination laws are enforced, were entirely free of the disease throughout the entire year.

The nearness of California to old Mexico, where vaccination is not thoroughly carried out, and the large influx of Mexicans into southern California, means constantly recurring opportunities for variola epidemics, if a sufficiently large population of unvaccinated persons contact with such carriers.

It sometimes seems a pity that those who conjure up all types of dreadful blood diseases as a result of vaccination, and who hold that vaccination is a remedy worse than the smallpox itself, could not get together and submit themselves to variola infection. The experiment would demand, of course, that such individuals had never been vaccinated. The thought comes to us from time to time that in the long run it might be well if the compulsory vaccination laws were abrogated, physicians advising friends and clients to be vaccinated, and permitting those who hold vaccination to be undesirable and detrimental, to try out their theory. The reappearance of pock-marked faces in our midst might help bring us back to earth, and prove again that diseases such as smallpox are not mere figments of the imagination.

CERTIFIED MILK

A few years ago a card for scoring a dairy was practically unknown. The writer aided in formulating the forms first used by the Public Health Committee of the Los Angeles County Medical Association. He remembers some of the excursions on Sundays, when these volunteer inspections by the late Luther M. Powers and the late Stanley P. Black, health officers of Los Angeles and Pasadena, in company with Dr. Fitch C. E. Mattison and himself, took place. He still visualizes the members of the committee leaving their auto, to chase cows out of the head-waters of the Los Angeles River. He recalls their consideration of their own sketches showing how milk houses for the cooling of milk could be economically constructed. Following those early efforts, that committee formed the Certified Milk Commission of the Los Angeles County Medical Association.

Experiences such as these were had by other certified milk commissions throughout the state. The conjoint efforts of these committees from the county medical societies played a large part in educating dairy men throughout California in modern methods of sanitary handling of milk.

* * *

The above comments are made as an introduction to the newspaper dispatch from Washington, D. C., where the annual contest of milk samples

from certified dairies, under the auspices of the Association of American Milk Commissions recently took place. The fact that California has won these prizes for the highest grade milk produced, for four years, and that this production has been in good part due to the members of the medical profession who are on the certified milk commissions of our state, should be a matter in which we all can take pride, and seems worthy of mention.

The clipping referred to reads as follows:

Competing against samples of milk from the foremost dairies in the United States, Adohr certified milk, a Los Angeles product, has been awarded the highest score in the national contest for the fourth successive year, according to an announcement made by the American Association of Medical Milk Commissions at Washington, D. C.

With the products of thirty-three dairies being scored by the officials, the high record of 99.5 per cent carried off first honors in this year's contest. Samples of Adohr milk were expressed to Washington ten days ago, and two days were spent by the judges in examining the entries.

Attention of dairy experts throughout the world is being directed to the milk supply of Los Angeles by its consistent winning of national milk-scoring contests. With the exception of the 1924 contest, when California milks were barred from shipment because of the outbreak of hoof and mouth infection, every national contest beginning with 1923 has been won by entries from Adohr Stock Farms.

THE A. M. A. AND THE VOLSTEAD ACT

Without in any manner wishing to engage in a controversy as to whether alcohol is or is not a medicinal element of great value, the Associated Press dispatch, giving the action of the House of Delegates of the American Medical Association should be of interest to members of the medical profession.

The principle laid down that "no law can establish a scientific fact," is one that might well be taken to heart not only by adherents of alcoholic prohibition, but by those who hold to antivaccination, antidiphtheretic serum and similar viewpoints, and who often exert strenuous efforts to bring their own prejudiced slant on scientific matters such as the foregoing into compulsory legislation for all other citizens.

The expression of opinion of the House of Delegates of the A. M. A. in support of the important principle involved is much to its credit. The dispatch to which reference was made follows:

Acting on the expressed principle that no law can establish a scientific fact, the House of Delegates of the American Medical Association voted today to prepare for submission to Congress a bill designed to remove present legal restrictions on the amount of whisky a physician may prescribe for his patients.

The proposition was discussed in executive session and the vote was taken after two hours of debate, which produced a proviso that the proposed measure be framed in cooperation with prohibition enforcement authorities. A proposal that the Association send to its members a questionnaire on the medical value of alcoholic liquors was referred to the board of trustees.

A statement issued at the close of the meeting said the vote was unanimous and declared it the feeling of the organization that "legislative bodies composed of laymen should not enact restrictive laws regulating the administration of any therapeutic agent by physicians legally qualified to practice medicine."

MEDICINE TODAY

Current comment on medical progress, reviews of selected books and periodic literature, by contributing editors.

Clinical Pathology, Bacteriology, and Parasitology

Chronic Carbon Monoxide Poisoning—The dangers from carbon monoxide poisoning gas are becoming quite widely known and appreciated. The Los Angeles *Times* under date of March 13 carried a short article stating that a policeman directing traffic on one of the congested corners in the center of Los Angeles was so affected by the gases inhaled during his hours on duty that he appeared in a somewhat intoxicated condition at the end of the day.

Dr. H. G. Beck of Baltimore, in a paper recently read before the American College of Physicians in Cleveland, gave some interesting facts. He stated that carbon monoxide is nontoxic, but that the danger comes from its close affinity for hemoglobin. This affinity, however, has been greatly overemphasized, for the combination can be broken up rather easily. It is odorless, and is poisonous in a percentage as low as 0.05 per cent when inhaled over a long period of time. An exposure to 0.4 per cent causes definite symptoms in one hour's time. The exhaust from automobiles averages 6 per cent carbon monoxide; and an automobile running in a closed garage will create a dangerous atmosphere in three minutes' time.

Chronic poisoning results in an increased red cell count running from six to nine million, with 95 to 125 per cent hemoglobin, and an occasional eosinophilia. The subjective symptoms are dizziness, headache, blurring of vision, weakness and palpitation. Usually the symptoms disappear quite rapidly upon removal from the influence of the gas.

Experiments have shown that a patrolman at the end of an eight-hour duty may show as high as 30 per cent saturation with carbon monoxide.

Another quite interesting fact that is more frequently overlooked, is the possibility of poisoning by means of the common habit of smoking. Doctor Beck stated that analyses of the blood of smokers who inhale show a very definite amount of absorption in the blood stream amounting to from 6 to 22 per cent saturation. If this work can be confirmed by others, much experimental work must still be done, to accurately determine to what extent exposure to small amounts of carbon monoxide continuously, or periodically over long periods of time, may result in the development of disease, or in shortening human life.

H. E. BUTKA,
Los Angeles.

Obstetrics and Gynecology

Sedimentation Test in Gynecology—It has long been known that if blood is treated with an anticoagulant and allowed to stand, a separation of two constituents occurs, namely, serum and red

blood cells. It has also been recognized that this sedimentation occurred at a definite rate and represents a nonspecific biologic reaction indicating the suspension stability of erythrocytes in noncoagulable blood. In the presence of infection this sedimentation occurs more rapidly, and this variation has been recently employed as an aid to gynecologic diagnosis. The simplicity of the test is one of its recommendations.

Technique—Hard glass tubes 5 mm. in diameter and 6.5 cm. long with a capacity of 1 cc. are used. The tubes are marked at the 1 cc. level and at points 6, 12, 18, and 24 mm. respectively below. Eight-tenths cc. of blood are drawn into a Luer syringe which contains .2 cc. of .5 per cent sodium citrate solution. The mixture is thoroughly shaken and transferred to the sedimentation tubes. The time required for the sedimented red blood cells to reach the 18 mm. mark is noted. Three hours is accepted as within normal limits. A sedimentation time below two hours is considered too rapid and distinctly pathological.

The application of this test in obstetrical practice has been of interest. In the early weeks of pregnancy there has been no marked variation in the sedimentation time, and the test therefore is of no value in the diagnosis at this period. After the fourth month there is a rapid sedimentation which increases with the advance of pregnancy. During the third or fourth week of the puerperium the time returns to the normal limits. In the presence of threatened abortion, and following uncomplicated abortions, the time is reduced to an hour.

With pelvic infection the rate of sedimentation varies directly with the virulence of the infection and the extent of the pathologic involvement. Sedimentation with severe infection may be completed within a few minutes and is closely paralleled by the leukocyte count and temperature curve. However, the diminished sedimentation time frequently occurs before there is any elevation of temperature or leukocytosis and may persist for some time after the latter two have become normal. It may, therefore, be regarded as a more delicate prognostic index as to the proper time for surgical therapy of pelvic infections. The modern conception of the treatment of these pathologic processes demands the recognition of the value of tissue cell proliferation, formation of antibodies and the natural resistance of the individual in effecting a cure, and emphasizes the vital importance of determining the proper time for surgical intervention.

Uncomplicated fibroids in the absence of fever or leukocytes frequently show a diminished sedimentation time which agrees with our knowledge of latent or quiescent infections which are so commonly associated with this tumor formation. Myomata complicated by anemia, and degenerations, as do ovarian tumors, show marked acceleration of the sedimentation time.

Carcinoma of the uterus, even though the tem-

perature and leukocytes are normal invariably show a rapid sedimentation.

In the treatment of latent streptococci pelvic infections the test is of very real value. The streptococci may remain alive, yet quiescent, in pelvic cellular tissue for many years. They readily become activated and, freed from their surrounding barriers by surgical trauma, may pass into the blood stream. In the presence of a postabortal uterine infection, even though the temperature and leukocytes are normal, an appreciation of a rapid sedimentation time, will prevent us doing an unnecessary curetage and breaking down nature's line of defense.

The sedimentation test is of real value in the diagnosis of infection, and when correlated with the history, physical signs, temperature and leukocyte count, has genuine prognostic significance.

Alice F. Maxwell,
San Francisco.

Disease Prevention

Pathogenicity of *Brucella Mellitensis*, Variety Abortus, for Human Beings—There has been doubt in the minds of many investigators as to whether *Brucella mellitensis*, variety abortus (the cause of infectious abortion in cattle), may produce infection of human beings. Alice Evans¹ has shown that this organism is very closely related to the one which causes Malta fever, which is highly infectious for man, and many other workers have confirmed her observations. Meyer and Fleischner,² however, found that the abortus variety is very much less virulent for monkeys and other laboratory animals than is the true *mellitensis*.

During the past three years instances have been reported in various parts of the United States in which human beings who were suffering from obscure fevers were found to have living *Brucella abortus* in the urine, or in the blood stream, or to have high titres of specific agglutinins for *Brucella abortus* in the blood. Evans³ has recently assembled twenty cases from the American literature since 1924, and refers to a number of other cases which were reported to her by personal communication. Similar cases have been reported in South Africa, Italy, Palestine, and the Dutch East Indies; and in practically all instances there is history that the patients drank raw milk from herds which were infected with infectious abortion, or handled infected cattle or hogs.

The evidence is strong, therefore, that human beings may become infected with *Brucella mellitensis*, variety abortus. The course of the disease in man is febrile, of the undulant fever type like Malta fever, but appears to be less severe than in Malta fever. It has been mistaken for typhoid fever, meli-

ary tuberculosis and other prolonged, febrile diseases, and is especially liable to be confused with tularemia.

These observations are important because of the high incidence of infectious abortion among dairy herds in many parts of the country. Experiments have shown that the organism may be recovered with little difficulty from the milk of a large proportion of infected cows, and there can be no doubt that varying numbers of the bacteria may be ingested with raw milk.

It is unfortunate that certain interested industrial organizations are making use of these facts in propaganda against certified milk, but it should be remembered that this is being done for business reasons. The certified dairies in the past have adopted measures to control known dangers from raw milk, and it is to be expected that they will take the necessary precautions to control infectious abortion in dairy herds, whether they are certified or not, and experience has shown that this can be done by careful selection of new stock, care of the calves and young cattle, and vaccination.

The available evidence indicates that the danger of infecting human beings, while real, is probably not great; but further observation is necessary before we can be sure of the actual degree of danger. However, it can be said that there is no emergency which necessitates placing a ban upon all raw milk and that our present knowledge of infectious abortion does not justify the condemnation of certified milk.

Ernest C. Dickson,
San Francisco.

Neuropsychiatry

Physical Constitution and Personality—Even before Gall attempted to read personal traits in the projections and depressions of human cranium, there existed considerable interest in the relation of body construction type and the personal reaction type. Recently Kretschmer discussed the topic under the title "*Körperbau und Character*" (English by Sprott, "*Physique and Character*"). Lately Wertheimer and Hesketh, after a brief review of related work, further utilized anthropometric data, especially a simple anthropometric index, in the study of "*The Significance of the Physical Constitution in Mental Diseases*." They used Kretschmer's main division of body types: (a) the pyknic, associated with the open (extroverted, social, syntropic), reaction type and present in about 60 per cent of manic-depressive patients; (b) the asthenic and athletic body types, associated with the shut-in (introverted, schizoid, idiotropic), reaction type, which, especially the asthenic, is commonly found in schizophrenic (dementia precox) patients. They pointed out variations in findings at different age levels; also they admitted many transitional and contrasting cases.

The physician in general practice naturally asks what is the net result of these findings, when applied

1. Evans, Alice C.: Jour. Infect. Dis., 1918, 22:580.

2. Meyer, K. F., and Fleischner, E. C.: Proc. Soc. Exper. Biol. and Med., 1919, 16:152; also Trans. Amer. Ped. Soc., 1920, 32:141.

3. Evans, Alice C.: Jour. Amer. Med. Assn., 1927, 88:630.

to the diagnosis, prognosis and treatment of his patients. From the point of view of clinical psychiatry, the following answer appears justified:

1. There undoubtedly exists certain correlation between body types and personality. The presence of a strongly deviating body type by no means always spells the approach of mental disaster; however, as Adolf Meyer might say, it suggests "an increased liability" in certain directions. Fortunately in diagnosis we need not depend on these data alone. It is generally possible during preschool age, certainly before puberty, to diagnose these and other deviations in reaction type by means of psychiatric tests and observation of behavior. Naturally the usual kind of test of intelligence is of little aid since the essential problem is to ascertain the motives and mechanism of reactions, rather than results in terms of quantity and accuracy.

2. From the point of view of prognosis and therapy, it is important that the many forces we sum up under the title of "environment," exercise an influence upon the development of the reaction type. More than that, they are capable to substantially enhance or impair aggressive, defensive and stabilizing capacities of an individual. Then also the environment is not often so fixed as to be incapable of moderation, hence the person carrying "an increased liability" need not be overtaxed beyond capacity to endure.

To utilize these opportunities is at once the obligation and the promise of the present-day psychiatry; which, not forgetting the already stricken, primarily must aim at prevention of the first break. However, it is the physician in first contact with the child or youth, upon whom generally rests the responsibility for early diagnosis of such deviations.

About one-half of first admissions to state hospitals belongs to the two main groups mentioned: the manic-depressive and the schizophrenic. Some of these disasters no present-day effort could have saved; others, entering the gate, undoubtedly might have continued more or less efficient and happy members of human society had they been given early aid to maintain sufficient adjustment to their particular reality.

V. H. PODSTATA,
Livermore.

Orthopedics

Backaches—What They Indicate—The routine examination of the back should be included in all physical examinations where backache is a symptom. This part of the thorough study of the average patient has not infrequently been neglected. Irregulars at times have prospered because of such neglect in otherwise thorough examinations. There is nothing essentially mysterious in back problems, though exact diagnosis is difficult and sometimes impossible.

The following is a brief outline useful in routine physical examination of the back:

1. Bare the whole back.
2. Inspect it in the standing, sitting, and lying positions.
3. Note variations of the normal curves both antero-posteriorly and laterally.
4. Note the attitude of the head, the level of the shoulders and pelvis.
5. Put the various segments of the spine through their

active range of movement and note the limitations and subjective complaints in each.

6. Give attention to the musculature, noting particularly muscle spasm and muscle tone.

7. Palpate the various segments (standing, sitting, and lying) throughout the entire spine; but particularly of the area of complaint, noting muscle spasm and points of maximum tenderness.

8. Straight leg raising in the supine position gives important information regarding sacrolumbar and sacroiliac disturbances.

9. Note the stance and the feet. They give the clue to many postural backaches.

10. Study the segment involved with both antero-posterior and lateral x-ray films.

The variations from the normal, and the localization of the symptoms found in such an examination, in conjunction with the history, in a large percentage of cases will give data on which to base a reasonable diagnostic conclusion.

From an orthopedic standpoint, backaches may be due to trauma, static defects, arthritis or destructive bony lesions. Frequently one, two or three of these complicate each other. All the various lesions that one finds in joints elsewhere may be found in the joints of the spine—strain, sprain, sprain fracture, minor and gross fracture. The back in this regard differs from an extremity only in that the nerve tracts are more intimately associated, and the treatment by rest and protection is obtained with more difficulty.

Static, back strain, backaches due to postural, developmental or muscular defects, are almost as common as eyestrain headaches. The headache from eyestrain differs essentially in no way from the backache due to back strain, except in location.

The arthritic backache calls for a consideration of all the other complicating problems, as well as a study of the general bodily factors involved in arthritis. Arthritis displays itself most often at those points of the body which are most subject to chronic trauma or strain.

In treatment of the orthopedic backache, keep in mind that the injured joint needs rest and protection; that the strained joint needs support, and that the arthritic joint responds most readily to both rest and protection, plus a removal of the causal foci.

H. W. SPIERS,
Los Angeles.

Orthopedics

Progress in the Study of Arthritis—Under this caption appears an editorial in a recent number of the *Journal of the American Medical Association*. The writer comments on the work of Cecil and Archer, and of Pemberton and his co-workers, and considers that these "more recent contributions advance our knowledge."¹ In what respect the writer neglects to say.

There are two ways of advancing our knowledge in medicine. The first method is to develop an idea from the inner consciousness, and then to accumulate facts to support it. This is rapid, spectacular, often temporarily successful and often profitable. The cults follow it exclusively. It leads along pleasant paths to oblivion. The second method is by patient investigation to assemble definite facts, and then to reason to a conclusion. It is slow, laborious,

1. J. A. M. A., 1927, Vol. 88, p. 651, February 26, 1927.

and as a rule not remunerative. For centuries the medical profession followed the first method, but in recent years it has adopted the second, in almost everything except diseases of the bones and joints. There seems to be something about the study of these organs which causes one to lay aside reason and to adopt speculation and mystery. The typical orthopedic surgeon lives in a different atmosphere from his fellows. He deals with mysterious things which they cannot understand. He speaks in hushed tones of "function" as if he invented it, of impingements, of posture. As in Eddyism, so in Orthopedic Surgery (in capitals, be it noted) the true devotee must turn to the same shrine in the east when he worships.

If one will read earlier writings one will find talk of a rheum (something floating or flowing) as the cause of disease. Hence rheumatism. This changes to a habitus, a diathesis, a dyscrasia. The more it changes the more it is the same. This diathesis, uric acid or other, causes inflammation in joints. How it causes the inflammation is immaterial. The diathesis changes again to faulty metabolism. Arthritis is caused by faulty metabolism. Health is metabolic equilibrium, metabolic balance. Disease is faulty metabolism. Arthritis then is due to disease. Elementary.

This arthritic habit, this diathesis, this faulty metabolism: to what is it due? Many answers have been made to this, but one is as old as history, and perennially new, or decked out in new raiment of words—some error in diet, something one eats or fails to eat or drink—tea, coffee, meat, vegetables, alcohol. The pendulum swings back and forth on carbohydrates and proteins. Fifty years ago the Salisbury diet of rare beef and hot water held the stage. Later meat was taboo, and one fed arthritis patients on a meat-free diet. Of recent years the pendulum swings back, and we speak of carbohydrate tolerance.

Of classifications of arthritis there is no end. Some of them are so complicated that one wonders if their authors can remember them overnight. Some investigators pin their faith to clinical points, others to anatomical, others to etiological. Most combine the three in their classifications. To the student, the remarkable nomenclature is a bar to knowledge. Hypertrophic to one is degenerative to another; atrophic is proliferative or rheumatoid or infectious. Progress in the study of arthritis comes to consist in inventing new names for old, and devising more elaborate classifications. Meanwhile our patients go through the same old routine, diet, salicylates, baths, physical therapy, climate. At times the main thing seems, under some plausible pretext, to get them into someone else's hands.

Truly, as the *Journal of the American Medical Association* says: "The study of the arthropathies is far from complete." How then shall we go about the task of completing it? There is but one way here, as in diseases of the other organs of the body—patient investigation in the laboratory, and correlation of our findings with those obtained in the clinic. One cannot treat a disease intelligently until one knows exactly what it is. Most investigators of arthritis seem to forget this. Their writings betray

a painful ignorance of the morbid anatomy of the disease they essay to treat. They exhibit a plethora of theory, and a paucity of facts.

LEONARD W. ELY,
San Francisco.

Pediatrics

Hemotherapy in Pediatrics—The use of whole blood in the treatment of certain diseased conditions is not new. In 1862 some experimental work was done with whole blood and blood serum intraperitoneally, but it was not until 1875 and the following nine years that clinical application was made of this mode of therapy. This work was reported in Italian and German literature.

For a number of years following, no especial attention was given to hemotherapy until it was discovered that the injection of human blood would stop bleeding as met with in some new-born infants. In these infants, it was necessary to give the blood intravenously and this required the services of surgeons especially trained. Later, it was found that if whole human blood or serum was injected subcutaneously, the same results would follow.

Pediatrists all over the world then began treating various diseases with whole blood injections. The results were very surprising. Erysipelas, for example, which in the new-born always had a 100 per cent mortality, responded to this whole blood therapy, with cures in many instances. It was tried in various septicemias with good results. When infants suffering from malnutrition were given 20 to 30 cc. of whole human blood subcutaneously they seemed to take a new lease on life. In various anemic conditions the use of whole blood is a stimulus to the blood-forming tissues.¹

The question of supplying larger amounts of blood, however, was still a problem, particularly when the subject was an infant or a very young child with veins which were difficult to locate.

In 1923 Siperstein and Sansby^{2 3 4} reported some experimental, and later clinical, work on intraperitoneal injections of whole citrated blood. They found that this method was as valuable as intravenous administration; and that "intraperitoneal transfusion of freshly citrated blood acts as a true transfusion and not as the absorption of nutrient material."²

In intraperitoneal transfusion blood and fluids are supplied. The red blood cells are absorbed unchanged. However, in this method, the bone marrow is inhibited in its production of red blood cells probably because the work of the blood is taken up by that injected and there is no stimulus of blood-forming tissues. The citrated solution is such that when diluted the blood has from 0.2 to 0.25 per

1. Taylor-Rood: The Fate of Subcutaneously Injected Red Blood Cells, *American Journal Diseases of Children*, 20 : 337, October, 1920.

2. Siperstein, David M., and Sansby, J. Martin: Intraperitoneal Transfusion with Citrated Blood—an experimental study, *American Journal Diseases of Children* 25 : 107, February, 1923.

3. Siperstein, David M.: Intraperitoneal Transfusion with Citrated Blood—a clinical study, *American Journal Diseases of Children*, 25 : 202, March, 1923.

4. Sansby, J. Martin: Intraperitoneal Transfusion of Citrated Blood. The effect of an intraperitoneally produced plethora on the hemopoietic activity of the bone marrow. *American Journal Diseases of Children*, 30 : 659, November, 1925.

cent of citrate of soda. The only apparatus necessary are large glass syringes and large gauge needles, for ease in withdrawing and injecting the blood. Strict surgical asepsis is indicated. The amount used varies from 100 to 250 cc., according to the size of the child. If repetition is necessary it is easily done, as the injected blood is usually absorbed in from twelve to eighteen hours. The site of the injection is below the umbilicus and a little to the right or left of the midline. The blood should be matched when giving intraperitoneally, although this is not absolutely necessary.

The field of hemotherapy is large. Much of this work has been reported in pediatric literature, though some is to be found in current medical literature. The opportunity is open for men in general family work to use the above outlined methods. There is no complicated technique. It is being done daily in the home and no special skill is required, just the ordinary asepsis of any surgical proceeding.

More cases should be treated and reported to encourage others in the use of this life-saving, health-giving procedure.

A. J. SCOTT,
Los Angeles.

Physical Therapeutics

The Physiological Basis of Physical Therapy: A Beginning—Physical therapy has had and is having an enormous vogue, but whether to the benefit or the detriment of the patient, and of the profession, is as yet a debatable question. The plea for physical therapy at present is that it gives the doctor a feeling that he is doing something for the patient, and it gives the patient the feeling that something is being done for him, and keeps him satisfied mentally while he is getting well. The plea against physical therapy is more complex, more difficult to state fairly and embodies more detail. In the categorical order of the minister's sermon, its defects may be stated as follows:

1. It lacks a scientific basis, is purely empiric, and has all the qualities that associate themselves with quackery, namely: mystery, ease of application, relative harmlessness, and lucrativeness. These qualities apply to the vast majority of physical therapeutic procedures. In a few instances it may be that the above is an overstatement, but, in the vast majority, it is at least a conservative statement, and in not a few a gross understatement. Physical therapeutics is today in the same state that chemical or drug therapeutics was before the days of pharmacology—purely empiric, the result of a little accumulated experience. Gradually, in drug therapy, pharmacologists began to study the real action of drugs with the result that but a few drugs still remain in the useful list, the vast majority of the drugs of a century ago having been relegated to the realms of oblivion. If one enumerates the various physical agencies and tabulates the pathological conditions and symptoms for which they have been used; and then attempts to tabulate the definitely known physiological actions of these agencies, he will be struck on the one hand, by the great number of symptoms for which physical therapeutics are

employed; and on the other by the extremely scant and meager amount of definite knowledge which we possess on this subject.

A few points concerning our ignorance of some of the procedures used hundreds of times daily may serve to awaken a healthy curiosity concerning them. Massage has been used since the dawn of human intelligence, but its exact action is as little understood as in the days of Hippocrates. When a limb is massaged is more blood brought to the part as a whole or only to the surface of the part, and are the deep portions left relatively ischaemic? No one knows. When a diathermic current is applied, say to a knee, does the current pass through or round the knee? It is true that a piece of dead meat or a potato can be cooked by a diathermic current, but the conditions in a dead piece of meat or a potato are very different from the conditions in a living knee with its capillaries and larger vessels, its nerves carrying central and peripheral impulses, its metabolites, etc., let alone pathological organisms, toxins, and various tissue changes in disease.

No physical therapeutic agent is used as frequently as heat. Its soothing effect is a matter of common knowledge and its use as ingrained in us as any folklore custom. Its definite action is, however, almost a closed book. We know certain things it does in the skin and a few experiments (crudely carried out) have been made concerning the depth to which heat will penetrate; but there our definite knowledge stops.

These examples are sufficient to show that even with the common forms of treatment our knowledge is woefully lacking and worse with other less known physical agencies.

2. It can bring the regular profession very close to the out-and-out quack. There is very little difference between a regular doctor who treats a symptom on an unknown basis with a physical agency whose action he does not understand, and an out-and-out disciple of some of our latter-day cults.

3. A very real danger in the use of physical therapy is the treatment of some symptom and thereby the oversight of a perfectly obvious lesion. This is no mere hypothetical statement.

4. Physical therapy pays. Manufacturers put out attractive machines, make extravagant claims for them, and unthinking physicians buy and, having bought, use and, having used, charge.

However, a better day appears to be dawning. In a dissertation for his doctorate in pharmacology, Lucien Dautrebande,¹ of the University of Liege, has shown that scientific methods can be applied to the study of physical therapeutic measures. In a most admirable piece of work entitled "*L'Étude Physiopathologique et Therapeutique des Troubles circulatoires dans l'Asystolie*," he considers the circulatory and respiratory changes in cardiac decompensation, and compares the results of treatment by immersing the forearm in a cold bath for a given time, of treatment with digitalis, and of treatment

1. Dautrebande, L.: *Arch. Internationales de Méd. Exp.* 1926, 2:413-548; also in monograph form, H. Vaillant-Carmanne, 4 Place St. Michel, Liege, Belgium.

by immersing the forearm in a warm bath. Dautrebande demonstrates that a warm bath has a digitalis-like action. However, it is not so much his results as it is his scientific method of attack and his demonstration that physical therapeutic measures can be studied from a scientific basis as were drugs to drugs that merit attention. These new methods signalize a beginning in a much neglected study of physical therapy, and it is to be hoped that university medical schools will carry out similar investigation as a duty.

ARTHUR L. FISHER,
San Francisco.

Physiology, Biochemistry, and Pharmacology

Surface Phenomena and Sickle-Cell Anemia—

In view of the increasing importance assigned to surface phenomena in living structures it is of interest to note instances in which surface forces seem to play a rôle in diseased conditions. Recently H. W. Josephs¹ has called attention to an interesting set of conditions existing in so-called sickle-cell anemia.

When the erythrocytes of a patient with sickle-cell anemia are washed five to seven times with physiological salt solution the abnormal cell forms regain their normal appearance. If the washed cells are replaced in serum, or in the saline used for washing the erythrocytes of normal patients or of patients with sickle-cell anemia, the abnormal forms reappear to the same extent as originally. But the replacement of the washed cells in plasma does not result in abnormal forms. The author concludes that all plasmas contain an unknown substance which is removed by adsorption on the erythrocytes, that this substance can be washed off with saline, and lastly that this substance is responsible for the appearance of a certain number of abnormal forms in patients having sickle-cell anemia. Joseph states that there was no reduction of surface tension in the salt solutions after washing the cells, and therefore the adsorbed substance is not a constituent of bile. The further observation was made that in the presence of sickle cells there was a marked tendency to stringy agglutination.

From the data presented it is difficult to draw definite conclusions, but the fact that the cells re-assume abnormal forms in serum and in the saline washings, though not in plasma, indicates the existence and emphasizes the importance of a delicate physical-chemical equilibrium between the cells and the suspending medium, possibly in virtue of a toxic substance in the anemia studied. The results are in accord with the purely experimental findings regarding the thrombocyte and erythrocyte changes produced by agents causing anaphylactoid reactions² in which physical-chemical forces were responsible.

FLOYD DE EDS,
San Francisco.

1. Josephs, H. W.: Bull. Johns Hopkins Hospital, 1927, xl: 77.

2. De Eds, F., and Mitchell, V.: Jour. Pharm. Expt. Therap., 1926, xxviii: 433.

Proctology

Anal Fistula—Bleeding from Rectum—Anesthesia in Rectal Operations—Recent advances in the treatment of anal fistula are suggested by Norbury and Gabriel.¹ The difficulty hitherto has been the exact determination of tortuous and unsuspected tracts in complicated fistulae with multiple external openings. Often the operation is unfortunately unsuccessful owing to some of these tracts being inaccessible to demonstration either by the probe or by the injection of dyes. These two surgeons inject lipiodol followed by x-ray stereoscopic photographs of the tracts. A more accurate estimate of the branching fistulae is thereby obtained. Furthermore, when the tracts themselves are diseased, success of any operation on them is in proportion to the thoroughness with which drainage is instituted. Thus, great saucer-shaped wounds should be produced which, however, heal entirely if no fistulous tract remain. The healing of such wounds Gabriel states may be greatly facilitated by using Thiersch skin grafts subsequent to the operation.

One type of bleeding from the rectum offers its own diagnosis and that is, endometrioma involving the rectum. The patient's hemorrhage in such cases is associated with menstruation, which is the pathognomonic sign. Extrauterine endometriomata are not uncommon, but those causing bleeding from the rectum are exceedingly rare. Two instances are reported by L. M. Miles.² Microscopic investigation of these shows that the rectal mucosa is resistant to perforation by a pelvic endometrioma and that bleeding, although menstrual, occurs irregularly at monthly intervals, because the bleeding is dependent upon rupture of the tumor during its periodic congestion and not from growth through the mucosa itself. The treatment is total removal of the tumor if possible; otherwise, a bilateral oöphorectomy or radiation of the ovaries by the roentgen rays.

Murietta, Buie and others³ have added excellent discussion to the problem of anesthesia for operations on the rectum and anus. It is a subject still somewhat unsettled. Major operations produce a great amount of shock for well-known reasons. In such cases spinal anesthesia, if not otherwise contraindicated, has virtually no risk when this risk is compared to the magnitude of the operation itself. It is a different matter when one suggests spinal anesthesia for the minor operations in the perianal region, for there is an absolute danger by this method. One may operate satisfactorily on hemorrhoids, fistulae, fissures, etc., under gas and oxygen anesthesia when given by an expert. Local anesthesia distorts the flaccid parts of this region considerably and, if it were for some reason necessary to block sensation, it would be more helpful to the operator to infiltrate the caudal canal or the sacral foramina. This means, however, requires a certain experience and dexterity, but should be known by the proctologist. Caudal and transsacral anesthesia is effective in twenty or more minutes, while spinal anesthesia results in five minutes. Sacral anesthesia of the two

1. Norbury, E. C., and Gabriel, W. B.: Proc. Roy. Soc. Med., January 12, 1927.

2. Miles, L. M.: Minnesota Med., February, 1927, pp. 88-93.

3. Trans. Amer. Proc. Soc., 1925, pp. 4-21.

types mentioned is used considerably in America but rarely in England. In the latter country spinal anesthesia for major rectal work has been used consistently since the surgeon, A. E. Barker, introduced it from Germany; and stovaine which he used, has never been supplanted. In combination with nitrous oxide and oxygen it is the favorite method in major surgery of the lower bowel. M. S. WOOLF,

San Francisco.

Surgery

Treatment of Osteomyelitis of the Jaw—

Osteomyelitis, more properly termed necrosis, of the jaw is an exceedingly dangerous condition and demands infinite patience in its treatment.

In the acute state, too radical surgery in removing bone and curetting is most likely to result in a septicemia and possibly death, for new blood channels are thereby opened and the infection, as a rule streptococci predominating, gains entrance to the general circulation. Drainage of the infected area is the only justifiable treatment at this stage. It should be obtained preferably by gently clearing out the dental pocket; or, second choice, by buccal approach to the infected area or, if necessary, skin incision and opening of the periosteum laterally, or at the lower border. Mouth wash and bi-daily gentle manipulation to insure the proper drainage are essential. X-ray to show the presence or absence of necrosis is of no value under approximately ten days, and will do harm at this stage by lowering the local tissue resistance.

In the chronic stage, the basic procedures are the gradual removal of sequestra performed as spontaneous separation occurs, and avoidance of disturbance to the periosteum and the new bone which develops from the live bone cells on this layer. The diseased bone must be left a sufficient length of time, approximately ninety days, in order to retain the normal contour of the mandible. Simultaneously the new bone is forming at the periphery and gradual extrusion of the sequestra to the center, from which they may be removed without harm, ensues. The teeth, especially when only partially developed, should be left in place, for they will respectively become fixed and continue to function or grow to function. During this period, strict attention must be paid to the mouth hygiene and, if necessary, dental or interdental splinting employed, to hold the proper occlusion of the teeth of the opposite side of the mandible and the opposing teeth above.

Osteomyelitis of the jaw then, in the acute stage, should be treated by adequate drainage only, and this obtained by as little trauma as possible. In the chronic stage, time should be allowed for the new bone to develop so as to assume the form of the necrosed bone, and the dead bone to be extruded gradually from the center as sufficient separation occurs. As Blair¹ has suggested, an Italian proverb, "He who goes slowly, goes safely; he who goes safely, goes surely," should be the dictum in treatment of osteomyelitis of the jaw.

JOHN HOMER WOOLSEY,
San Francisco.

1. Blair, V. P., and Brown: Osteomyelitis of the Jaw, Surg. Clin. N. A., 5, 1925, pp. 1413-36.

Tuberculosis

Vaccination in Tuberculosis—There is much evidence to show that resistance against tuberculosis is developed in the children of tuberculous parents. Like the phenomenon of evolution, the fact is clear, although the mode of operation may be vague. In proof of the development of resistance to tuberculosis, there are facts not only supported by living material, but incontrovertible evidence is also offered by vast autopsy studies such as those by Opie,¹ Robertson,² and many others.

A disease implanting itself upon virgin soil reaps a terrible harvest. The opposite is true, however, in communities where the disease has become endemic. Epidemiological studies, notably those of Topley³ and others in England, and Flexner⁴ and his associates in this country, have shown that the factors of resistance and disease incidence among exposed and unexposed groups may be paralleled in clinical practice. The statisticians have added further important evidence of a definite relationship existing between exposure to infections such as tuberculosis, and the morbidity and mortality rates in groups of population. Dublin⁵ has pointed out the relatively lower rate for tuberculosis in children of the industrial as compared with the general population. Significantly, too, he has commented on the greater prevalence of the disease in the industrial group. It is clear, from whatever angle we would approach the subject, that tubercularization leads to a lessened incidence in the offspring and, more important still, to a favorable progress and outcome of the disease in those who may have become infected.

One of the most striking studies in recent years, reported by Drolet,⁶ has adduced evidence of fundamental interest to the student of chest diseases as well as to the general practitioner. It was found that exposure to tuberculosis was reported more frequently among nontuberculous patients than among those who were tuberculous. More than twice as many gave a history of tuberculosis in one or both parents among 2509 nontuberculous persons as compared with a group of 2785 tuberculous patients among whom only 14 per cent reported a parental history of infection. Among 5852 persons with a negative history of tuberculosis in parents, 59 per cent were found to be tuberculous, whereas among 1577 persons with a positive parental history, 34 per cent were tuberculous. Making due allowance for the smaller number of subjects in this last group, the difference appeared, none the less, striking enough to warrant the conclusion that the incidence of tuberculosis was inversely proportional to the amount of parental infection. Furthermore, evidence was adduced to show a greater tendency to recovery in patients with tuberculous parents than in members of families attacked by the disease for the first time.

In the light of the foregoing observations and

1. Opie, E. L.: Am. Rev. of Tuberc., 1924, 10, 249; Bull. N. Y. Tuberc. Assn., March and April, 1924, p. 3.
2. Robertson: Tr. Twentieth Annual Meeting, Nat. Tuberc. Assn., Atlanta, May, 1924.
3. Topley, W. W.: Lancet, 1919, 2, 1, 45, 91.
4. Flexner, S. et al.: Am. J. Med. Soc., 1926, 171, 469; *Ibid.* 171, 625; Trans. Cong. Am. Phys. and Surg., 1919, 11, 56; J. Exp. Med. 1922-26 (numerous papers).
5. Dublin, L.: Tr. Nineteenth Meeting Nat. Tuberc. Assn., 1923, June 20, p. 18.
6. Drolet, G. J.: Am. Rev. of Tuberc., 1924, 10, 280.

much more material which cannot be discussed for lack of space, it might be of interest to analyze critically the widely heralded and exploited recent work of Calmette and his associates.⁷ Vaccination of infants with the strain of tubercle bacilli known as BCG (Bacillus-Calmette-Guérin), according to these investigators, protects against infection with tuberculosis. It is stated that 25 per cent of unvaccinated "control" babies succumbed to the disease within twelve months, whereas the vaccinated babies failed to contract the disease for a year or sometimes longer. Obviously, while the work may be correct in principle or theory, many years must elapse before an accurate interpretation of the data may be safely made. To offset such a conclusion, however correct this might prove to be, there is the added fact that the type of experimental material does not permit one to arrive at a decisive conclusion. In the first place, it is impossible to gauge with any degree of accuracy the results of vaccination in a group of persons exposed to conditions which are not only likely to but are known to favor the development of resistance to the disease in question. This is a point to be kept distinct from the factor that is being investigated experimentally on a clinical scale. Furthermore there is no reliable method available for estimating the number of children likely to escape tuberculosis in such a group or in an unvaccinated group. The figures of Drolet and others already mentioned should give one pause. Finally the question arises, how are we to be certain of an immunity attributable to vaccination, in the face of so many instances of tuberculosis (lymph glands, etc.), occurring in children in whom symptoms cannot be evaluated clinically, and in whom pathological changes cannot be demonstrated satisfactorily. The protection claimed by the French workers in the reports to date might just as well be laid to the individual differences in resistance of the children, such that an infection, instead of occurring within twelve months after exposure, happened to take place later.

Viewing the studies with BCG open-mindedly and not being averse to the acceptance of something new, one should, however, be willing to examine the data in terms of our knowledge of immunity, and of biological phenomena of infectious disease. To this extent it appears that the reports of vaccination against tuberculosis are, to say the least, premature and unsupported by convincing evidence.

A point of more than passing interest, too, is one regarding the supposed innocuous nature of the BCG organism which, it is claimed, cannot infect, even though it be injected in the living state. To accept this idea with complete nonchalance is difficult. Experience of laboratory workers would tend to make one hesitate before using living bacilli for injection into humans, however avirulent and innocent the organisms may appear to be. Not infrequently strains of tubercle bacilli, plague organisms (*B. pestis*) and many other pathogenic species, unaccountably lose their virulence for the experimental animal and in an equally mysterious fashion suddenly regain infectious properties. These occurrences, despite a fixed technique of artificial cultiva-

tion in the test-tube or inoculation into animals, tend to refute the assumption that pathogenic bacteria are always tractable and well trained. The writer has had such experiences while working with plague and tuberculosis and can confirm the experiences reported by others.

As to the outlook for artificial immunization and possible therapy in tuberculosis, experimental evidence suggests that neither the bacillary element alone nor the toxin element by itself will give us the key. Attention might well be focused upon the use of both substances in the form of specially prepared filtrates (toxins) and tuberculin fractions, representing the bacterial substance as well as the toxin produced by the organism. Clinical experience with the disease supports the possible validity of such a method of attack.

The purport of this discussion is a plea for the exercise of some restraint, and a more critical evaluation of clinical investigations, and of the more exalted studies, better called researches. In this way, perhaps, sensationalism will be put into the background and sound facts, compiled by careful and laborious and patient methods, will add irrefutable knowledge to the science and art of medicine. With John Hunter, let us not *think* so much as *try*.

FREDERICK EBERSON,
San Francisco.

The Free Professional Report Evil—Why a physician should be expected to look up past records of patients, compile reports therefrom, have the same typewritten, and forward to an insurance company or other organization or institution, and all without pay for his time used, energy expended, and professional opinion given, is a topic which is discussed by Dr. John V. Barrow of Los Angeles, in the communication which is here printed.

The points which he brings out are worthy of serious consideration not only by individual members of the profession, but by the officers of the component county medical associations. Members of the California Medical Association are invited to send to CALIFORNIA AND WESTERN MEDICINE, letters dealing with subjects such as this. Space will be given them in the "Medical Economics" or other columns.

Doctor Barrow's letter follows:

"Ever since medicine became a business, physicians have been imposed upon for free service by many who could well afford to pay for that service. Probably the most flagrant offenders are the life and other insurance companies, which are constantly demanding reports from physicians for the results of examinations and treatments given to patients, who are seeking either new insurance or reinstatement in old insurance.

"The insurance companies know that the physician cannot charge the patient for this service. They also know that the good-will of the patient may be sacrificed by the physician's refusal to give this service without charge or stint. The service requested is primarily to the insurance company, and not to the patient. It is intended to save the time and expense of a thorough check-up examination by the company. As a matter of fact the statement by a physician that he has treated the applicant for an illness in the past is no guarantee to the company that the disease in question has had any influence on the insurability of the applicant. The only true test of the applicant's physical condition is a thorough-going, searching examination at the time the insurance application is before the company.

"A better medical examination by the company would make for better insurance service and less risk to the company. It would be better business for the insurance

7. Calmette, A., and Guérin, C. et al.: Ann. de l'Inst. Past., 1926, 40, 89.

people and would not put them in the rôle of indigents, seeking gratuitous help from physicians.

"Any person or institution requesting a medical report should be ready to pay for that report and not make it a demand on charity. It is to be hoped that physicians will look more to their professional business, and realize that socialized medicine is being forced upon us by corporations, including our own state; and not by a sick public whom it is our duty and privilege to treat in a business way."

Improved Urethral Syringe (F. A. Van Buren, M. D., San Antonio, Texas)—Some years ago I devised a long, slender barrel syringe (Fig. 1) for treatment of the female urethra. This instrument became very popular and was useful to those doing gynecology and urology. It may be used also as a uterine syringe.



Fig. 1—Syringe with long, slender barrel

Recently I devised another model, for the female urethra and bladder only. It has a capacity of about 30 cc. of fluid, a longer curved conical tip reaching the bladder, and eccentrically placed so as not to interfere with a vaginal speculum if used. Slight pressure prevents the return of the liquid (Fig. 2).

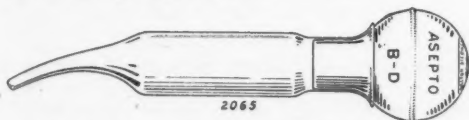


Fig. 2—Syringe for female urethra and bladder

These syringes are always in working order; they have the nonfilling bulb, and are easily cleaned and sterilized. They are manufactured through the courtesy of Becton Dickinson & Company, makers of the "Asepto" line.

Reprinted by permission of the American Medical Association Journal.

Sanitation in Flooded Areas of Mississippi Valley—Reports that have been received by the journal indicate that the acute sanitary problems arising out of the flood in the lower Mississippi Valley are well in hand and that plans for the restoration of the refugees to their homes as the waters recede are under way. The authorized refugee camps in the state of Mississippi now contain, it is said, about half of the inhabitants of the overflowed districts. The rest are scattered in unauthorized camps, are being cared for by relatives or friends, or have accommodated themselves as best they could in their own homes or other buildings on their premises. The authorized camps have been erected and are being policed by the national guard of the state. Sanitary control is under direction of the state health officer, acting in conjunction with the local health units. The American Red Cross has furnished services and supplies without stint. The people of the several communities in which these camps are located have united as a unit to support them. Few cases of acute communicable diseases have been brought in with the refugees, and in no case has there been any spread of infection. Practically all the refugees in these camps have been vaccinated against typhoid, probably more than half of them have been vaccinated against smallpox, and some have been vaccinated against diphtheria. Quinin has been freely used to cure and prevent malaria. The sickness rate in these camps compares favorably with the sickness rate in the average community under normal conditions. The outstanding sanitary lesson of the flood is the necessity for full-time health officers in states and counties, with adequate health organizations behind them. If the flood results, as well it may, in the establishment of that system of health administration, some permanent benefit will have come out of the general catastrophe.

CALIFORNIA MEDICAL ASSOCIATION

PERCY T. PHILLIPS.....President
WILLIAM H. KIGER.....President-Elect
T. HENSHAW KELLY.....Vice-President
EMMA W. POPE.....Secretary-Editor

FRESNO COUNTY

The regular monthly meeting of the Fresno County Medical Society convened at the Hotel Californian, Fresno, Tuesday evening, May 3. The meeting was unusually long, but a most interesting and enthusiastic one; attended by over fifty members of the society. Dr. D. I. Aller, president, presided.

The regular routine of business was suspended in order to hear from Chief of Police W. G. Walker and Captain of Police John P. Murphy in regard to a subject of much interest and importance to the doctors practicing in the city of Fresno. Congested parking conditions on the streets of Fresno have been for years an increasingly difficult problem of solution for the Police Traffic Department. In spite of these conditions the police department had made an exception in the matter of tagging the doctor's vehicle, as recognized by the various medical emblems—insignia and dash-plates obtainable through the police department. It has been found, however, that this special privilege granted the physician has been grossly abused by a few physicians who obtained duplicate plates for their second or family car; also by nurses, cultists, and dentists to whom this privilege was not extended. A police bulletin that became effective May 1st therefore canceled all such privileges.

Chief of Police Walker outlined the necessity of the comparatively drastic bulletin, which in brief is a final effort to correct this prevailing evil, and to make possible a new method of restoring the parking privilege to the doctor only. It is the plan of the Police Department to issue a new emblem only to legitimate physicians and surgeons who are first approved by the Fresno County Medical Society. It was suggested by the Police Department that a committee be appointed by the society to cooperate with the Police Department in the matter of choosing the emblem and in granting permission for the emblem. The suggestion was approved by the society, and the sincere appreciation of the courtesy extended the society expressed to the Police Department.

Resolution Adopted by the Society

Whereas, It was the will of the Almighty to remove from this earth, Benjamin F. Walker, son of our honored and esteemed Dr. J. R. Walker and nephew of Dr. George Walker; and

Whereas, Benjamin F. Walker was known to be a young man of sterling character and great promise in his chosen line of endeavors; and

Whereas, This society feels that the entire community has suffered the loss of a good citizen and faithful son, be it

Resolved, That the Fresno County Medical Association through its officers and governors extend to the bereaved family their heartfelt sympathy; and be it further

Resolved, That a copy of these resolutions be sent the bereaved family and a copy spread upon the minutes of this Association.

THOMAS F. MADDEN
D. I. ALLER
C. O. MITCHELL.

Dr. Thomas F. Madden, who attended the Los Angeles state convention, gave a brief report of the convention. Doctor Madden stressed the advisability of electing delegates and alternates for future meetings whom we were certain would attend and take an active part in the meetings.

Report of Committees

Committee on Health Examinations of Preschool Children.

Gentlemen: At a joint meeting of your Board of Governors with the Fresno County Health Officers, held April 19, 1927, with the president, D. I. Aller, presiding,

a committee was appointed by the Chair, consisting of two members of this board, together with the city of Fresno, and the Fresno County Health Officers, to submit for your approval, tentative plans for conducting health examinations of the preschool children of this county.

We have the honor to report as follows:

1. That this Association endorses the examination of preschool children as recommended by the State Board of Health.

2. That the family physician perform these examinations wherever possible.

3. It is felt necessary to clarify somewhat the term "Health Examinations." This committee, therefore, wish to define "health examinations" as consisting of the following:

- (a) A permanent, accurate, complete record.
- (b) Ample time for an examination.
- (c) The subject to be without clothing.
- (d) A thorough review by the examining physician of his findings and of the history.
- (e) That this report be made in triplicate, one copy of which will be available for the parents, or guardian, one copy for the school, and the original to be kept in the files of the health officer, to be open to the family physician whenever requested.
- (f) Children to be urged to report the following year; or when feeling ill, losing weight or having cough.
- (g) Fair remuneration for the examining physician, \$5 minimum fee in the office. Recommend that in incorporated cities or school districts wherever possible that a fee of \$10 per hour be paid the examining physician.
- (h) Send all eye and ear cases to physician specialists.

In contradistinction of the above thorough health examination, all other methods which are less thorough shall be designated as "Health Inspection."

The first method requires for its completion a doctor of medicine, the second may be performed by nurses or other assistants trained in this type of work, with which latter this committee shall not concern itself in this report.

Consultants: When so designated by the examining physician the child should be sent to a consultant, as, x-ray, laboratory, or other specialists, these consultants to be designated by the respective health officer in whose district the child resides.

Your committee respectfully submit for your approval the foregoing as a basis for examination of all such school children. It is the opinion of your committee that any less thorough method is not worthy the consideration of the Fresno County Medical profession generally.

It is our belief that these records should be so carefully compiled and so conscientiously executed that they may remain the permanent records of this county, and that they reflect nothing but credit upon the medical men employed in this work.

There is a feeling, not without basis, that the promiscuous inspection of school children by nurses, and other trained help, and by hurried, overworked medical men does great harm to the cause for which this work is being undertaken. It engenders a lack of confidence of the laity and the loss of support of the more conscientious men in the medical profession.

C. O. MITCHELL, *Chairman.*

Recommendation of Board of Governors on Immunization of School Children Against Diphtheria

Gentlemen: Regarding the immunization of school children against diphtheria, we have the following to recommend:

1. That this Association is not in favor of the wholesale immunization of public school children free of charge or even for the nominal cost of the toxin-antitoxin.

2. That this Association concurs with the action of the Health Officer and Board of Health of the city of Fresno, to wit: There being no funds available in the budget for such work, and feeling that the taxpayer at large should not be burdened with this expense, the board does not feel that the wholesale immunization of the public school children against diphtheria is available. We wish, therefore, to throw the responsibility of immunization upon the parents, after due publicity as to importance of treatment has been given.

3. We further recommend that permission be granted the Board of Governors of this Association to run a paid

advertisement in the two daily papers of Fresno City, setting forth the values of toxin-antitoxin and statistics regarding immunization. Literature and propaganda will be obtained from the State Board of Health, some of which may go in as story material. These articles and advertisements are to be signed by the Fresno County Medical Association.

BOARD OF GOVERNORS.

Dr. Harry Spiro of San Francisco read a most interesting and highly technical paper entitled "The Heart as Viewed from Various Angles." Doctor Spiro also showed several instruments of his own design and lantern slides and motion pictures.

Doctor Spiro outlined briefly the various methods of arriving at a diagnosis in heart disease, including history, percussion, auscultation and radiography and concluded that, outside of certain arrhythmias, he would rather rely on his method of radiography than any one other method. Heart measurements and contour as determined by films and fluoroscope at various angles permits of very accurate diagnosis in organic heart disease. In fact, unless we know the angle at which a cardiac film is taken, radiological findings are very unworthy guides. This is likewise true of the aortic shadows.

Discussion on the part of the society members was limited, for the subject, while not entirely new, was highly technical for the average member. I believe we all feel that much good is to come of this manner of cardiac examination in the near future, and much credit is due to those pioneering the work.

E. C. HALLEY, *Assistant Secretary.*

✱

LOS ANGELES COUNTY

The First Annual Institute on Public Health, under the joint auspices of the Los Angeles County Public Health Association, Inc., and the Medical Advisory Board of the Los Angeles County Health Department will be given at Los Angeles, commencing June 20 and ending July 9.

This course will have as its major speaker, Charles E. A. Winslow, A. M., Doctor Public Health, Lauder Professor of Public Health, Yale Medical School, New Haven, Conn.; Senior Sanitarian, United States Public Health Service (retired); late General Director, League Red Cross Societies, Geneva, Switzerland; well-known author and publicist on public health topics, etc.

• • •

The instruction and work of this institute will fall under two major heads:

1. A Technical Instruction Course

Designed to meet the needs of those desiring to improve their capacity in efficient public health service, such as physicians, nurses, social service workers, laboratory technicians, sanitarians, and others. This course will be given during morning hours at Patriotic Hall, 1816 South Figueroa, near Washington, 8:30 to 10 a. m.

2. A Popular Evening Lecture Course

Being a series of six lectures on important subjects of professional and lay interest. To be given at Patriotic Hall, 1816 South Figueroa, near Washington. These lectures will be given in the auditorium. Moving-picture films on public health subjects will be shown from 7:30 p. m. to 7:45 p. m. The lectures will cover the period from 8 to 9 p. m.

• • •

Technical Section, June 20 to July 9

The presiding officer at each meeting will be County Health Officer J. L. Pomeroy or some member of the County Health Department Advisory Board. All lectures in this course will be at Patriotic Hall, 1816 South Figueroa. Hours: 8:30 to 10 a. m.

The lectures in the technical section will be on the following subjects:

FIRST WEEK

Monday, June 20—Opening exercises, 9 to 10 a. m., County Health Officer J. L. Pomeroy, M. D., presiding.

Address of Welcome by R. T. Radford, president Los Angeles County Public Health Association.

Remarks: Dr. George H. Kress, chairman Medical

Advisory Board, Los Angeles County Health Department.
Lecture No. 1—"Planning a Community Public Health Program for cities over Fifty Thousand."

Wednesday, June 22—Lecture No. 2: "Planning a Public Health Program for Cities Under Fifty Thousand."

Friday, June 24—Lecture No. 3: "Special Problems of Municipal Sanitation."

Saturday, June 25—Lecture No. 4: "The Hygiene of Occupation, Recreation, and Applied Personal Hygiene."

SECOND WEEK

Monday, June 27—Lecture No. 5: "Sanitation in the Control of Communicable Diseases."

Wednesday, June 29—Lecture No. 6: "The Newer Problems of Public Health."

Friday, July 1—Lecture No. 7: "Inter-Relations of Modern Social Service and Preventive Medicine."

THIRD WEEK

Tuesday, July 5—Lecture No. 8: "The School Health Program and Health Education."

Wednesday, July 6—Lecture No. 9: "Modern Prevention of Tuberculosis."

Friday, July 8—Lecture No. 10: "Public Health Nursing, Its Problems and Its Future."

B. Popular Lectures Section

These popular lectures will be given in the evenings, in the auditorium of Patriotic Hall, 1816 South Figueroa. There will be a moving-picture film from 7:30 to 7:45 p. m. on some public health subject. Lectures proper will begin at 8 p. m. The subject of each lecture will be introduced by brief remarks from Los Angeles and California physicians, having a special knowledge of the subject under discussion. Professor Winslow will give the major talk of each evening.

Tuesday, June 21—Lecture No. 1, 7:30 to 9 p. m.: "The Evolution and Significance of Modern Public Health."

Presiding officer: Dr. George Parish, Health Commissioner, city of Los Angeles.

Introductory remarks by Dr. J. L. Pomeroy, County Health Officer, and Dr. George H. Kress, chairman Advisory Board, Los Angeles County Health Department.

Thursday, June 23—Lecture No. 2: "Public Health International Relationships."

Tuesday, June 28—Lecture No. 3: "Public Health as a Vocational Opportunity." Specially planned for undergraduates in nursing, dentistry, medicine, and allied sciences.

Thursday, June 30—Lecture No. 4: "Infant and Maternal Hygiene." Program in charge of the pediatricians and County Medical Milk Commission.

Wednesday, July 6—Lecture No. 5: "Mental Hygiene and the Public Health."

Thursday, July 7—Lecture No. 6: "Life Insurance, Industrial Medicine and Life Extension Work—What They Mean to the Public Health."

This institute has been made possible through financial assistance from the Los Angeles County Public Health Association, and four members of the staff of the County Health Department. Through this institute, with its technical and popular lectures it is hoped to raise the standard of local health activities and to help all who take the courses to gain inspiration for better work. It is planned to make this institute on public health an annual event.



SACRAMENTO COUNTY

The April meeting of the society was held in the Empire Room of the Sacramento Hotel on the evening of the 19th. Forty-one members were present. The minutes of the February meeting were read and approved. There were no case reports.

Insanity and crime or, more particularly, Insanity and the Prevention of Crime was the subject chosen by Burt F. Howard. The doctor said:

"In spite of variations in symptomatology due to personality, certain forms of insanity may be diagnosed as constituting a menace to society before the afflicted individuals have had opportunity to commit crime. The prompt detention of these persons would save many lives, and this most desirable end would be facilitated if public opinion would sanction and provision be made for temporary observation of all suspected cases by experts in psychopathic hospitals.

The types most often at large, while at some time potentially dangerous are melancholic epileptic and paranoid forms. While these are usually irresponsible, they are often held accountable for crime committed.

Constitutional psychopathic inferiority was not considered within the province of his paper.

Confusion in expert testimony in case of crime committed by the insane would occur less frequently if accurate observation as to facts were possible to the alienists. This confusion would be still further lessened by having the court select, in each case, an unbiased commission who would render a written report."

The discussion entered into by Wilder, Harris and Reynolds, and concluded by Howard, centered about the so-called "anti-social" group, and the question of insanity as applied to this group.

Applications for membership were read for the first time from Clarendon A. Foster and Thomas R. Haig. The applications of Eva M. Shively and Raymond M. Wallerius were read for the second time and were presented for a vote. Both were elected to membership.

The report of the Board of Directors quoted action of the San Joaquin County Medical Society on Goodale's Physicians' and Surgeons' Insurance Company plan. The attitude of the San Mateo Medical Society relative to the Industrial Medicine Service, as shown in their letter to Governor Young, was presented. Announcement was made that the bulletin of the San Francisco County Medical Society will now be received directly by the local hospitals. The board presented amendment to Article II of the Constitution, and an addition to the By-Laws.

Communications acknowledging our expressions of sympathy were received from the families of F. A. Grazer and W. E. Musgrave.

Letters from Robert A. Peers and the California Tuberculosis Association announced the meeting of the California Tuberculosis Association in Sacramento on May 6 and 7.

Notes from Harlan Shoemaker, in reference to Senate Bill No. 60 and Assembly Bill No. 1261, have been referred to the Governor together with our adverse criticism of these bills. A kindly reply has been received from the Governor. Thomas Nelson and Sons wrote us in answer to an inquiry made on the charges for delivery of their books that they do charge an additional fee over and above the sale price of their books to get them to the doctor. This question was asked of the Nelson Company, due to the fact that several inquiries were made through the secretary's office. It seems that the Nelson Company is the only medical book-selling company which follows this practice. The doctor, in good faith, makes this purchase, expecting delivery to his office for the originally stated purchase price, and, to his surprise, finds a notification that his books are lying at some railroad terminal for him to arrange for their delivery to his office and pay all carrying charges.

Under New Business, the amendment to the Constitution and the addition to the By-Laws were laid on the table until after the state meeting. This was done with the purpose of consulting with the state officers regarding their legality and the possibility of conflict. The delegates to the convention were instructed as to our desires in this matter and were told to maintain the identity of the society.

The 1928 committee outlined its plan of action.

The banquet committee reported no deficit.

A motion was made, seconded and carried to extend a vote of thanks to those men instrumental in bringing the meeting of the American College of Surgeons to our city. The meeting adjourned to a buffet lunch.

BERT S. THOMAS, Secretary.



SAN BERNARDINO COUNTY

Minutes of the meeting of the San Bernardino County Medical Society held May 3, 1927, at the County Hospital in San Bernardino.

Meeting was called to order by the president at 8:10 p. m. Minutes of the previous meeting were read and approved.

Question of the June meeting was brought up and

moved by Dr. C. G. Hilliard and seconded by Dr. G. G. Mosely that no June meeting be held. Carried unanimously.

Committee on Industrial Medicine reported by Dr. G. G. Mosely. He also gave a brief report of the state meeting.

The San Bernardino County Milk Commission reported through Dr. F. Folkins regarding the sale of certified milk produced in Los Angeles County and sold in San Bernardino County. The decision being that such milk is subject to the same rules that govern the sale of certified milk produced in San Bernardino County and sold in Los Angeles County.

The program of the evening was then entered upon. "Symposium on Common Infections of the Upper Respiratory Tract." Each speaker was allowed ten minutes and took part in the following order: Dr. Lenore D. Campbell, "Etiology and Pathology"; Dr. G. Mosely, "Standpoint of an Internist"; Dr. C. A. Wylie, "Pediatrician"; Dr. A. T. Gage, "Ear, Nose and Throat"; Dr. C. G. Hilliard, "Surgeon"; Dr. K. L. Dole, "Public Health." A discussion on the symposium was opened by Dr. D. C. Mock.

In the absence of Dr. A. T. Gage, Dr. W. Savage was called upon to fill his place.

The meeting adjourned at 10:30. There were about thirty-five present.

✱

SAN DIEGO COUNTY

The regular dinner meeting of the society for April was held in Seltzer's Auditorium where, after a generous spread, Dr. A. B. Wessels entertained the society for an hour with a delightfully reminiscent account of his recent tour of the European nose and throat clinics. The listener, while enjoying Doctor Wessels' tour of the British Isles, France, Germany, Austria, Italy, Holland, and Belgium, was glad to get back to his own United States, and was impressed by the fact that his own clinics are probably as productive of culture and improvement in technique as were any of those visited by the speaker.

At the April meeting of the Mercy Hospital medical staff Dr. Fraser Macpherson gave an extremely interesting discussion on backache, cause and treatment from the standpoint of the orthopedist.

About fifty of our members attended the greatest session ever held by the state society at Los Angeles the latter part of April.

Already a number of our members are on their way East on study bent and to enjoy the American Medical Association meeting at Washington, D. C.

We hope to announce the opening of the new Medical-Dental Building within a few weeks, as the interior finishing is going rapidly forward and it is practically rented throughout. As this is San Diego's first exclusive professional building, it really marks an era in the development of the city and the advancement of its medical and dental professions.

ROBERT POLLOCK.

✱

SAN FRANCISCO COUNTY

Meetings of the society were held on May 3, 10, 17, 24, and 31. No further meetings will be held until August because of the summer vacations.

At the end of April the call was sent out for payment of the first installment of members' subscriptions to the fund for the new home at 2180 Washington Street, San Francisco, and the society is now busy collecting this money.

It has been found conveniently possible to serve refreshments in the new quarters and henceforth, after each general meeting on the second Tuesday of the month, nourishment will be provided to members and visitors. It is found that this adds a great deal to the social side of the society's internal relations, and is enjoyed by numerous members who thus find a stimulus for some nontechnical chatter after the meetings.

St. Luke's Hospital Clinical Club held a meeting at the hospital on April 14, 1927. J. Marion Read speaking upon the clinical and physiological significance of the blood pressure. He concluded that the pulse rate and pulse pressure vary directly with the basal metabolic rate, and that the increase in pulse pressure is due to a rise

in the systolic pressure, the diastolic pressure remaining practically constant. Some patients increase the minute volume by increasing the number of systoles, while others do it by increasing the quantity of blood thrown into the aorta at each systole, and if this be true pulse pressure might be a rough measure of stroke volume. Therefore, if the minute volume in a patient remains constant, reciprocal relations may exist between pulse rate and pulse pressure.

The meeting of St. Joseph's Hospital staff, San Francisco, on May 18, was called to order by Vice-President Dr. Frank Lowe, and reports were presented by the delegates to the recent meeting of the A. C. S. at Sacramento. Sister M. Agnes, superintendent of the nursing school, spoke first on "Importance of Hospital Standardization," abstracted below:

Hospital standardization has brought about an increased service, knowledge and spirit of cooperation. It is necessary to have forms for the doctors to fill out when applying for the privileges of the institution, which must be considered and be followed by the record of the doctor's efficiency, especially as a basis for promotion. Regulations for the admittance of patients with a provisional diagnosis is, except in emergencies, standing orders to facilitate the investigation of the sick and special written ones are recommended. Doctors should be responsible for a proper history and record of findings and progress, and at operation tissue removed should be examined by pathologist. Consultations seem very desirable with the opinion of the consultant recorded by himself. The medical house staff and nurses depend on visiting doctors for instruction. The appropriate number of patients in charge of student nurses and group private nursing by graduates is important. Prevention of improper surgery is engendered by standardization, and is made more probable by proper training, a probationary period, preoperative study and diagnoses, and staff conferences. Autopsies should be appealed for tactfully.

Dr. A. S. Musante, president of staff, followed with "Improved Hospital Staff Conferences," and concluded as follows:

Hospital staff conferences make principally for a more conscientious consideration of the patient. Acceptance of St. Joseph's as a standardized hospital was the beginning of a renaissance of better professional work, planning and construction of steel and re-enforced buildings for 350 patients and addition of new special and general men to the staff. The advantages of the moral and economical status of patients, due to the sacrifices and inspiration of the numerous Sisters in this hospital are important. The obligation of the staff to review monthly the hospital cases, especially mortalities, and assume the responsibility for a sound professional atmosphere is imposed by the American College of Surgeons and the American Medical Association. A doctor should only be absent from meetings if he is ill, out of town, or unavoidably detained professionally. Programs must consider the work of the hospital primarily and conclusively, although other attractions seem advisable. Public health lectures can be attempted to inform the thinking laity.

Drs. W. J. Lynch and Franz Herborn reported on autopsies and physiotherapy, and Miss F. Simmerly on the inauguration of "The Pulse," a monthly of the students of the hospital's school of nursing. A demonstration of a bedside clinic for nurses closed the meeting.

T. HENSHAW KELLY, *Secretary*.

✱

SAN JOAQUIN COUNTY

At a stated meeting of the San Joaquin County Medical Society held at the headquarters of the local Health District, 129 South American Street, on Thursday evening, May 5, the president, J. W. Barnes, called the meeting to order at 8:30 p. m. The minutes of the previous meeting were read and approved. Twenty-seven were in attendance. Those present were Drs. J. W. Barnes, E. L. Blackmun, J. F. Blinn, Winnifred E. Biethan, C. A. Broadus, Fred P. Clark, F. J. Conzelmann, L. Dozier, C. F. English, F. T. Foard, Percy B. Gallegos, E. C. Griner, J. P. Hull, L. R. Johnson, H. E. Kaplan, Grace McCoskey, F. G. Maggs, F. S. Marnell, Dewey R. Powell, A. R. Powers, S. F. Priestly, G. H. Rohrbacher,

G. H. Sanderson, J. J. Sippy, Margaret H. Smyth; William B. Wells, Health Officer of Riverside County as visitor, and Dr. George Warren Pierce of San Francisco, guest and speaker of the evening.

An invitation of the Central California District Dental Association to the members of the San Joaquin County Medical Society to be present at their meeting Saturday, May 7, at 8 p. m. at Wilson's Confectionary, was read and accepted.

Dr. Margaret H. Smyth rendered her report as delegate to the state meeting, which was accepted.

The president introduced Dr. George Warren Pierce of San Francisco, who spoke on the subject, "Recent Advances in Plastic Surgery."

Plastic surgery deals with the defects and malformations and the restoration of functions and improvement of appearance. This is done by transfer of tissue. Plastic surgery deals chiefly with defects involving the skin rather than the bones and joints. No two cases requiring plastic surgery are exactly alike, hence no "cut and dried" methods can be employed. Every case presents some special features. Each case must be carefully studied and the various methods of repair considered from every standpoint. Good surgical judgment is essential.

Skin grafts are divided into thin grafts and thick grafts; thick grafts which include the full thickness of the skin as in the method of Wolf, and thin grafts where only the superficial layers are used as in the method of "Thiersch." The speaker employs Esser's method of splinting the "Thiersch." This is accomplished by making a negative impression of the wound with dentist's impression material and then covering the mould with a "Thiersch" and placing it on the wound; this method insures evenness of the "Thiersch" and allows it to be placed under equal pressure. The mould is removed after a period of ten days or two weeks. The results with this method of treatment have been very satisfactory, and is applicable to defects of the eye, ear, nose and mouth, or anywhere on the body.

Doctor Pierce showed motion pictures and slides of his actual work which explained much in a short time, and illustrated the defects and deformities and the results of plastic surgery much better than any amount of theoretical discussion. The members asked questions, which Doctor Pierce answered in a practical way.

The chair extended the thanks and appreciation to Doctor Pierce in behalf of the society.

FRED J. CONZELMANN, *Secretary.*

SANTA BARBARA COUNTY

The regular monthly meeting of the Santa Barbara County Medical Society was held in the Cottage Hospital on May 9, with President H. E. Henderson in the chair.

There were present twenty-four members of the society. The minutes of the previous meeting were read and approved.

The scientific program consisted of the following:

Report of a clinical case of a third degree burn, Dr. Rex Brown.

Diverticulum of the Esophagus, with lantern slides, Dr. C. T. Sturgeon of Los Angeles. This paper was discussed by Doctors Robinson, Pierce, Means, Freidell, Nuzum, Koefod, and Stevens.

Esophageal Obstruction, Dr. H. Freidell. This was discussed by Doctor Means.

At the close of the scientific program the meeting went into executive session. It was moved, seconded and carried that the president appoint three members of the society as a committee to extend an invitation to the Pacific Coast Oto-Ophthalmological Society to hold their next annual meeting at Santa Barbara. The president appointed Dr. W. J. Mellinger, chairman, and Doctors Profant and Eaton to serve on this committee.

There being no further business the meeting adjourned.

WILLIAM H. EATON, *Secretary.*

TULARE COUNTY

The Tulare County Medical Society held a joint meeting with the San Joaquin Valley Health Officers' Association. The two societies met at Mrs. Estrada's Tamale Parlors in Visalia at 6:30 to enjoy a Spanish dinner.

The meeting was called to order at 7:30 by Doctor Zumwalt, president of our own society.

Members present were Doctors Gilbert, Preston, Ginsburg, Walters, Tourtillot, Hicks, Paine, Betts, Rosson, Seligman, Melvin, Loper, Brigham, McSwain, Zumwalt, Miller, Bond, Groesbeck, Pratt, Todd, Edmonds, Campbell.

Councilor F. R. DeLapp of Modesto was present in his official capacity as a guest.

Dr. W. R. B. Clark, director of tuberculosis of the San Francisco Board of Health, was present and gave a short but very interesting talk on tubercular contacts and their control.

Dr. William C. Hassler, San Francisco Health Officer, then spoke on problems of the Board of Education and the Board of Health, a very interesting talk and not too technical for the many school and county nurses who were present as our guests.

At Doctor Hassler's suggestion, all present stood in silence for one moment in honor of the anniversary of the death of Lister, April 5.

Thirty plates were set at the table, and a few more persons arrived after dinner.

H. G. CAMPBELL, *Secretary.*

PRIZE ESSAYS

The following is the report of the Clinical Prize Committee for 1926-27 as submitted by Dr. Dudley Fulton, Chairman:

"Your committee, appointed for the awarding of the research and clinical prizes for the year 1926-27, begs to report as follows:

The committee recommends that the essay entitled "The Diagnosis of Drunkenness," under the nom de plume of "Aretaeus," be awarded the prize for research work.

The committee does not award any clinical prize unless, in the judgment of the Council, this prize should be awarded as a matter of policy to maintain interest in this competition in the future.

The following recommendations are respectfully submitted to the Council:

1. That the policy of holding these competitions for research and clinical prizes be continued.

2. That this competition for prizes be given much more publicity than in the past. It is the belief of the committee that this might be accomplished by the following methods:

(a) That an announcement be made in each section of the society, urging greater interest in the competition.

(b) That more frequent mention of the matter be made in the state journal.

(c) That the secretary of the society remind each component society, which might be of benefit in keeping the matter before the individual members of the society.

3. That there be a change of two members of the Clinical Prize Committee each year.

The California Medical Association Research Prize of one hundred and fifty dollars, for the year 1927, was awarded Dr. Emil C. Bogen, 1100 Mission Road, Los Angeles, for his article, "The Diagnosis of Drunkenness," which appears elsewhere in this June issue.

CHANGES IN MEMBERSHIP

New Members—Fresno County—La Rue Moore, Elmer J. Schmidt, Fresno.

Los Angeles County—Louis Baltimore, Glenn O. Dayton, L. Ray Faubion, Lowell S. Goin, David H. Rosenblum, Clifford B. Walker, Los Angeles; Robbin E. Fisher, Pomona; Forest E. Fleming, Emile C. Houle, Beverly Hills; John C. E. Hagen, Walter W. Woods, Alhambra.

Sacramento County—Eva M. Shively, Fair Oaks; Raymond M. Wallerius, Sacramento.

San Diego County—Edward F. F. Copp, La Jolla.

San Francisco County—A. Lincoln Brown, San Francisco.

San Joaquin County—Percy B. Gallegos, Stockton.

Transferred Members—F. C. Ferry, from Los Angeles County to Orange County.

P. J. Hanzlik, from San Francisco County to San Mateo County.

Paul L. Markley, from Imperial County to San Diego County.

Mary C. Taylor, from San Joaquin County to San Francisco County.

Elected as Honorary Members to California Medical Association—John C. King, Pasadena; R. F. Rooney, Auburn.

DEATHS

Southworth, Henry E. Died at Los Angeles, April 29, 1927, age 54 years. Graduate Cooper Medical College, 1900. Doctor Southworth was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

Ghrist, Jennie G. Died at Glendale, May 5, 1927, age 58 years. Graduate Keokuk Medical School, Iowa. Licensed in California in 1924. Doctor Ghrist was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

MINUTES OF THE HOUSE OF DELEGATES, FIFTY-SIXTH ANNUAL SESSION OF THE CALIFORNIA MEDICAL ASSOCIATION

First Session

Held in the Music Room, Hotel Biltmore, Los Angeles, California, Monday, April 25, 1927, at 8 p. m.

I. Call to Order—The meeting was called to order by the President, William T. McArthur of Los Angeles.

II. Roll Call—The secretary called the roll; seventy-nine (79) delegates were seated, and the president declared a quorum present.

III. Report of the President—The following report was submitted by President William T. McArthur:

In addition to the presidential address, delivered this morning, I wish to submit, as perhaps worthy of consideration by the proper committees of the House of Delegates, the following:

1. We should endeavor to extend the influence and usefulness of our organization by increasing its membership. There are many good men outside of our association who could come in with profit to themselves and benefit to us. Not quite 50 per cent of the regular physicians of the state belong to the California Medical Association. Heretofore one objection to asking any regular physician to make application to join the county society has been that, frequently after he has done so, the applicant has been rejected by the Council of the county unit. This causes considerable embarrassment to the physician who invited him. If there is any doubt about one's acceptability, the way to overcome this difficulty is for the Committee on Membership to obtain all possible information about him, both local and general—information covering education, practice, character, etc., and present the same to the Council of the county society and obtain its approval before inviting the physician to join. A membership drive conducted along proper lines would, I believe, increase our membership fully 25 per cent.

2. The relation of hospital staff and county society meetings should be more clearly defined. The number of meetings a physician is obliged to attend these days is ruinous to his health and seriously interferes with his home life. Some plan should be devised whereby the hospital staff meeting could work in conjunction with, and form a part of, the regular county society meeting.

3. The profession should endorse and cooperate with all legitimate organizations having to do with increasing the number of standardized hospitals, or contributing toward their efficiency and betterment.

4. There is need of constant alertness on questions of public health policy.

5. The Committee on Industrial Medicine should be especially vigilant for fear that improperly trained persons jeopardize the physical welfare of many of our citizens and seriously disturb the economic phases of our social order.

6. The demand for public health news is so great that we should be watchful to see that information given

through the press or broadcast over the radio is in keeping with the best that scientific research work has produced.

7. The profession as a whole should be on guard lest a too paternalistic policy on the part of the county and state should lead to the pauperization of patients in our county hospitals.

The report of the president was referred to the Reference Committee.

IV. Appointment of the Reference Committee—The president announced that he had appointed as members of the Reference Committee, Harlan Shoemaker, Los Angeles, chairman; Edward N. Ewer, Oakland; John Yates, San Diego.

V. Report of the Council—The acting chairman of the Council read the following report of the Council:

Death of Doctor Parkinson and Doctor Musgrave—In the loss of these two men, the Council and the California Medical Association at large have been deprived of two most effective workers. Dr. James H. Parkinson was missed at the Oakland session of last year. He was then suffering from the malady which finally caused his death.

One must have been a member of the Council to have fully appreciated the full worth of Doctor Parkinson to the Association. As chairman of the Council through several consecutive years he kept himself in exact touch with every minute phase of association activity. He actually expended of his time and himself more than does any other councilor. We have been deprived of a tireless, enthusiastic, conscientious, judicious and courageous colleague. His place cannot be filled, for there is no one who has the requisite background of California medical history to equal his.

Dr. William Everett Musgrave was our editor for six years. The development of the journal of the California Medical Association he made his pride. He spared no pains, and worked at his task at times when, we suspect, he would better for his own good have rested from his labors. Our journal under his editorship developed into first place of state medical journals. Such qualities as were combined in him do not often unite in one man. Furthermore, Doctor Musgrave served us without remuneration. His place cannot be filled as he filled it. Truly the last year has dealt a staggering blow to our association in the loss of two such men.

Council Meetings from April, 1926, to April, 1927:

The Council has held three regular meetings during the year; the daily sessions during the annual meeting not included.

Annual meetings, April 27, 28, 29, and May 1, 1926, at Oakland.

Fall meetings, September 18 at Los Angeles, and December 4, 1926, at San Francisco.

Spring meeting, January 22, 1927, at San Francisco.

Special spring meeting, March 19, 1927, at San Francisco.

Eight sessions in all.

The financial condition of the Association is on a sound basis. The books and accounts of the Association were audited by Mr. Hugh Ross, public accountant, and according to his report on file were found correct. All claims are audited by the Auditing Committee, the bills approved by that member of the staff responsible for them. The voucher is then approved by the secretary, signed by the Auditing Committee and countersigned by the chairman of the Council and the secretary.

Annual Assessment—The statement made by the Council at the last annual meeting is quite as pertinent now as it was then. The funds of the Association have increased very satisfactorily. The gain is in proportion to that of the previous four years. However, we now are confronted with the necessity of paying a real salary to an editor. If we are to develop the permanent convention headquarters plan, we must have resources adequate for the purpose. The medical defense is not yet finished. There are still forty-three claims and cases pending. There is still a possibility of considerable drain on the

treasury by that avenue. The Council therefore recommends that the annual dues for 1928 be set at \$10.

Optional Legal Defense (Medical Society of the State of California)—Optional legal defense, inaugurated by the Council under instructions from the House of Delegates, went into effect July 1, 1924, for 168 members. There should be at least 1000 members to afford a sufficient margin of safety. It is, however, gratifying to note that an increase is being shown. When the doctor finally realizes what suits of this character really mean to him the increase will be more rapid.

Total membership December 31, 1926, 716.

In addition to the general counsel and the assistant general counsel, local attorneys are employed in practically all cases outside of Los Angeles and San Francisco, the total fees other than the regular retainers of all attorneys are shown in the first column. The prorated general office expense represents an arbitrary allocation against this department which was placed at one-sixth of the total general office expense up to 1920 and from then on to 1926 at one-third. In 1926 this was reduced to an estimated figure of \$50 per month. In addition to the cases and threatened cases of alleged negligence, the general counsel's report will cover the work of that department in connection with the proposed incorporation of the Association, the status of county hospitals, CALIFORNIA AND WESTERN MEDICINE and miscellaneous matters connected with the operation of the organization, proceedings of the Council, and the activities of your officers.

The Journal—The loss of Doctor Musgrave causes a crisis in the affairs of the journal which must be met. Doctor Musgrave put his heart, soul and strength into the journal. It was his work and his hobby. Such a combination of qualities as he possessed coupled with such vital interest in the work will be hard to duplicate. When we add the fact that he served us without pay we can say that his place can never be filled.

The Journal Committee of the Council is charged with the search for an editor who shall as nearly as possible match up to our requisites. For the present the Council has appointed temporarily Drs. George H. Kress and Emma W. Pope, joint editors. These most efficient members have stepped into the breach and have taken hold of the journal, in addition to their other Association duties and professional work, and you may rest assured that the journal will be continued on its usual high plane. There is no crisis. The committee will take time to make careful selection.

Permanent Convention Headquarters—For several years the Association has been giving serious thought to permanent headquarters. The size of our meetings is such that only the larger cities afford adequate room for meetings.

It is apparent to some of us that sooner or later we must look to our own resources for our convention facilities. Our thoughts have turned to the possession of a site, which shall be attractive and quiet, central geographically, easily accessible, with ample housing facilities convenient. A place where some day there may be pavilions for meetings, areas for members' cottages and camp sites, with a nucleus of permanent buildings, possibly housing a library and laboratory for research. Ultimately there may be a home for retired members—who knows!

Formation of the Medical Activities Committee—For the last four years the part of the annual program embracing consideration of institutions, organizations, education, hospitals, legal medicine, group medicine, and other activities of medical economics has been in charge of the League for the Conservation of Public Health. Our Association is under deep obligation to the League for the efficient services which it rendered to organized medicine during these years, in the elevation of standards in hospitals, medical schools and associated activities.

In order to standardize the procedure of the California Medical Association with that of the A. M. A. and other state associations, as well as to bring these activities under the control of the C. M. A., the Council formed a committee called the Medical Activities Committee, which will in the future carry out these duties.

Proposed Amendments to the Constitution and By-Laws—During the last year a Special Committee on Revision of the Constitution and By-Laws was appointed. This committee will submit a printed report to the House

of Delegates, with a supplementary report, containing additions, deletions, and alternative procedures. In view of the fact that the revision comprehends a survey of all the provisions of the Constitution and By-Laws of our Association, the Council suggests that all the pending proposed amendments to the Constitution and By-Laws be again introduced at this session, and consideration thereof deferred until the next annual meeting, at which time the special committee's proposed amendments will also be taken up. Further, that any members of the Association having proposed amendments to offer, submit the same to the House of Delegates through one of its members, at this meeting.

Incorporation of the Association—Inasmuch as the Association is accumulating a reserve and for other reasons, it is the sense of the Council that incorporation of the Association at this time is desirable. For that reason the matter of incorporation is in progress and will be dealt with in the report of the Council.

Disposal of the Stock in Better Health—At the meeting of the Association in 1926 it was reported that Dr. William E. Musgrave had given outright to the Association 200 shares of the capital stock of *Better Health* magazine. This represented a gift at par value of the stock of \$20,000.

Doctor Parkinson on May 1, 1926, gave to the California Medical Association one share of stock of *Better Health* magazine. It seemed quite proper to accept the stock when it was offered. However, the ownership of this stock proved to be a source of division among members of the Association. There was to be considered the matter of possible secondary liability as such a stockholder, also that the stock was in fact a minority interest in the corporation. Finally the Council did not feel that the Association should retain possession of an interest presenting such dangerous possibilities. On the other hand, the *Better Health* corporation was established and controlled by medical men. After full consideration of the elements entering into the question, the Council decided to give the stock outright to the League for the Conservation of Public Health, the majority stockholder.

Formation of the Legislative Committee—For several years the California Medical Association has refrained from any activities with respect to medical legislation which affected the medical profession. Consideration of any action upon all such matters was delegated to the League for the Conservation of Public Health. The League guarded our interests exceedingly well. It watched critically all proposed legislation and action of all kinds which might affect organized medicine. The League deserves the sincere thanks and appreciation of all members of this Association. In the last year it has been borne in upon the Council that our procedure was not standard and sometimes led to embarrassment. Accordingly the Council resolved to form a Legislative Committee, whose duty it should be to keep in touch with legislation affecting the medical profession. This committee though organized late has done a tremendous amount of effective work, has kept a member and a paid observer at Sacramento who have been in constant touch both with the committee and the work of the legislature.

The work of the committee has been satisfactory and successful in accomplishment of the duties for which it was organized.

The Council sees no reason why the C. M. A. cannot conduct its own business before future legislatures conservatively and ethically and with dignity and success.

The report of the Council was referred to the Reference Committee.

VI. Report of the Committee on Scientific Program—Dr. Emma W. Pope of San Francisco, chairman of the Committee on Scientific Program, read the following report:

As chairman of the Committee on Scientific Program I have the honor to report the signal success of both section officers and of the Los Angeles Arrangements Committee.

To the Arrangements Committee we are indebted for the speakers of the general sessions. To section officers for their unusual programs and for the invited guests. Hubert Work, Secretary of the Interior, and Hugh Cummings, Surgeon-General of the United States

Public Health Service, are addressing the Thursday session. Our disappointment is keen that Dr. Howard A. Kelly, one of America's foremost surgeons, has been compelled to forego his attendance.

From Chicago has come James B. Herrick and W. A. Evans; from Rochester, D. C. Balfour and Charles G. Sutherland; from Cleveland Clinic, H. J. Gerstenberger and R. S. Dinsmore; from the Queen State of the South, Stuart McGuire; and from our sister state of Utah, George Middleton.

The participation by our guests of the discussion of section papers will heighten the interest materially.

Most helpful this year was the combined meeting of the Program Committee with section officers at Santa Barbara on January 30. The consideration of a skeleton program disposed of any conflict of hours or rooms. The reading of completed section programs eliminated the possibility of any member presenting more than one paper and in a few instances effected transfer of speakers to programs more allied to the subject of the papers.

The section secretary is responsible for the program of his section. He must needs be a man of rare tact to persuade the unwilling but able member that he has something of value to present, and to evade the loquacious and unthinking; he must have character to avoid personal bias, and be moved by merit alone in the selection of his speakers. That section secretaries often serve but one year and barely learn their duties when they pass to another, increases our admiration of their accomplishments.

In many cases we found that secretaries have assumed office without any record of the programs of their predecessors. During the year, therefore, the secretaries of all sections have been furnished folders from the state office containing full information of former programs for a foundation record to which they can easily add their report and their recommendations that future incoming officers might begin their term of service with a tangible record of previous action and programs.

The usual meeting at a luncheon of all section officers, both incoming and outgoing and of all members of the Program Committee will be held this year on Wednesday, at which time policies for bettering the programs will be discussed. To all these section officers and to the Arrangements Committee of Los Angeles, the unqualified thanks of the California Medical Association for the splendid program of 1927 is heartily accorded.

The report of the Committee on Scientific Program was referred to the Reference Committee.

NOTE: The president expressed the disappointment of the Association on account of the absence of Dr. Howard Kelly, and announced that Dr. Chester Rowell and Dr. W. W. Campbell would take the place on the program.

VII. Report of the Auditing Committee—Dr. Morton R. Gibbons, chairman of the Auditing Committee, read the audit of accounts as submitted by Hugh Ross.

The report of the Auditing Committee was referred to the Reference Committee.

VIII. Report of the Secretary—Emma W. Pope, secretary, read the following report:

Nineteen hundred and twenty-six showed the usual growth of the California Medical Association, numerically and financially. Four thousand three hundred and twenty-seven members were recorded. On April 1, 1927, every county society had been reported and 3833 members were in good standing; almost eight-ninths of the total membership. Such promptness reflects both the interest of the members and of the county secretaries. Many who, through sentiment or economy had retained membership in the county originally joined, were transferred to the county of their present residence or business in compliance with the proposed amendment to our Constitution. The loss by death was heavier than for many preceding years; men prominent as officers of our Association and men high in the esteem and in the affection of the members were among those taken. Their places will not easily be filled.

Financially the year's record shows equal gain. That the Association was able to add to its cash surplus was

due to two main causes: first, that the editor of CALIFORNIA AND WESTERN MEDICINE accepted no salary; and second, that there was a decrease in the expenditures of the legal department. Many cases, as the report of the legal counsel shows, yet remain to be disposed of, and the increased activities of the Association in other lines may not enable us to make so good a showing this next year. Should the present dues, which at best are a hardship to few members of the Association be continued—even with the services of a paid editor—the California Medical Association will, though more slowly, accumulate a working capital sufficient to permit the governing body of our Association to progress as an association of our size should. To provide for a regular saving, the custom now followed by many state associations of regularly budgeting a surplus fund \$1 or \$2 of the annual dues might with benefit be adopted by the California Medical Association.

The Placement Bureau becomes better known yearly to our members. It would be interesting to have a record of the number of successful doctors who owe their start medically to positions secured through the state office. It has been our conscientious effort to fit the applicant to the position, that every doctor or hospital or business firm that has secured an assistant through the state office should be encouraged to become a regular user of the society's Placement Bureau. During 1926 thirty-five physicians and ten nurses and stenographers were successfully placed.

The Extension Service has helped to keep up interest in county society meetings. Names of new speakers and new titles to talks were added to the 1925 list. Since each county secretary makes his own selection of speakers and extends his own invitation, we have no way of recording the actual results. We can only feel this service is valuable alike to county societies and to program members, since the list of speakers increases yearly and monthly reports of county secretaries record regularly the talks by invited guests.

No change in the personnel of the office force nor of its management has been made during 1926. Each assistant is responsible for assigned work, while all are familiarized with the duties of the others that the routine of the office may never suffer by reason of the enforced absence of any assistant.

County secretaries have furnished full and accurate membership records, certifications of delegates and monthly society reports. The interest and cooperation of county officers are a never ending surprise. Such fulfillment of the duties of their office takes time, thought and system and encroaches on the leisure of busy practitioners. No annual report of the state secretary is complete without grateful acknowledgment of this splendid service, and thanks to the secretaries of the forty county societies that together form the California Medical Association.

The report of the secretary was referred to the Reference Committee.

IX. Report of the Editors—Dr. George H. Kress, on behalf of the editors, presented the following brief report:

The death of Doctor Musgrave placed upon the Council of the society the necessity of placing the journal under proper editorial supervision. In an emergency Doctor Pope and myself were appointed. It is our hope to carry on this journal on the same high standard as set by Doctor Musgrave, and with your aid we hope to accomplish this as far as is in our power. We have no special report to offer because our career has been too brief to make a detailed report possible.

Everything Doctor Musgrave did in placing this journal on such a high plane—the ideals he laid down—those are the ideals of the Council and of the editors, and those standards we pledge ourselves to uphold insofar as it is possible.

The report of the editors was referred to the Reference Committee.

X. Report of the General Counsel—Mr. Hartley F. Peart of San Francisco, general counsel for the Asso-

ciation, gave a brief outline of the work of the legal department of the Association. The general counsel referred to consultations with and advice to the administrative officers, personal attendance at meetings of the Executive Committee and the Council, and opinions both verbal and written, rendered in connection with the society's increased activities. Mr. Peart spoke briefly of extensive examination of the law and decisions in regard to the use of county hospitals for able to pay patients. The attorney also referred to the examination of the code provisions and authorities undertaken at the direction of the Council in connection with the proposed incorporation of the Association. This report covered the question of procedure necessary to be followed in the matter of incorporation. On this topic he discussed briefly the different features of the existing incorporations of the Los Angeles County Medical Association and of the San Francisco County Medical Society, the first being a general incorporation including all the members as members of the incorporation, the second being an incorporation of the directors and officers of the society representing the general membership. In his report the attorney favored the incorporation of the councilors and officers of the California Medical Association, all being members of the Association, as the most desirable form to be used. He also pointed out the necessity of amending the existing constitution to accomplish incorporation, and briefly touched upon the various conditions making it desirable to incorporate. The general counsel then made a complete report of the cases and threatened cases of alleged negligence in charge of his department under the old Medical Defense and Indemnity Defense Fund, showing a rapidly decreasing volume of this work, and outlined the purposes of the Medical Society of the State of California and the present status of that organization.

President William T. McArthur commended Mr. Peart on his report, which was referred to the Reference Committee.

XI. Unfinished Business—1. Amendments—Dr. George H. Kress, chairman of the Committee on Revising the Constitution, stated that the proposed Model Constitution had been presented to all members and stated that it would not be submitted tonight, as it was the desire that at the next meeting of the House of Delegates any alternative proposition might be submitted by any members; that all pending amendments would lay over until the next year so that it did not seem desirable to attempt to act upon any amendments this year. He stated that the proposed constitution is somewhat more explicit than the Constitution and By-Laws under which the Association is at present working. Doctor Kress invited all members to submit any proposed amendments they considered desirable. Doctor Kress stated that at the next meeting of the House of Delegates the amendments which were considered last year for the first time would be presented in regular form.

On motion of Dr. George H. Kress, seconded by Walter B. Coffey, it was

Resolved, That consideration of all amendments to the Constitution and By-Laws lay over until the second meeting of the House of Delegates.

XII. Resolution No. 1. Honorary Members—Percy T. Phillips, Santa Cruz, presented the following resolution:

Resolved, That on account of devotion to duty and years of service to the California Medical Association, John King, Pasadena; R. F. Rooney, Placer County; and M. L. Moore, Los Angeles, be elected honorary members of the Association.

Resolution No. 1, Honorary Members, was referred to the Reference Committee.

Resolution No. 2. Secretary-Editor—Dr. W. B. Chamberlain, San Francisco, presented the following resolution:

Resolved, That the House of Delegates hereby calls the attention of the Council to the fitness of Dr. Emma W. Pope for the position of editor of the journal, and

suggests that the work of editor and secretary be handled by her, under the title of Secretary-Editor.

Resolution No. 2, Secretary-Editor, was referred to the Reference Committee.

XIII. Reading and Adoption of Minutes—The minutes of the session were then read and, there being no objection, were approved.

XIV. Adjournment—There being no further business the House adjourned to meet at 8 p. m. Wednesday, April 27, 1927.

MINUTES OF THE HOUSE OF DELEGATES

Second Session

Held in the Music Room, Hotel Biltmore, Los Angeles, California, Wednesday, April 27, 1927, at 8 p. m.

I. Call to Order—The meeting was called to order by the president, William T. McArthur of Los Angeles, who announced that he had asked the president-elect, Percy T. Phillips of Santa Cruz to take the chair for the business part of the meeting. The president-elect, Percy T. Phillips, then took the chair and directed the secretary to call the roll.

II. Roll Call—The secretary called the roll. Doctor Duffield asked for a ruling from the Chair with reference to the seating of delegates who were not present at the first session in place of alternates seated at the first meeting. Dr. Percy T. Phillips, presiding, advised that there had been two customs in the House of Delegates regarding this matter; that in times past it had been settled in both ways, and that if there was a contest tonight the Chair would not decide the question, as there was no rule in Roberts' Rules of Order to cover the situation, but would allow the House to make its own rule by taking the matter up by vote and excluding contestants from such vote.

Dr. Michael Creamer, delegate from Los Angeles County, being present answered the roll call. Dr. William Duffield stated that Doctor Creamer was not present at the first session and therefore moved that he be not seated. No second to the motion. The Chair advised that Dr. Harry M. Voorhees, alternate, had been seated for Doctor Creamer at the first session, and that at the first meeting of the House of Delegates six delegates from Los Angeles County were absent and six alternates were seated in their places, and that a ruling was necessary as to which of these should represent Los Angeles County. Dr. Harry Voorhees not responding to his name, the Chair announced that as Doctor Voorhees was absent, and Dr. Michael Creamer was present, there was no contest and Dr. Michael Creamer was seated.

The Chair then called the names of the alternates seated at the first House of Delegates, and the names of the delegates for the places so filled by the said alternates and asked if there were any alternate present who wished to contest the seating of his delegate. Each of said alternates stated that he did not desire a seat, whereupon such delegates were seated.

The secretary then stated that ninety-five (95) delegates were present, and the Chair announced a quorum present.

III. Resignation of Delegate—The following letter from Dr. T. Henshaw Kelly, San Francisco, submitting his resignation as delegate was read:

"Please accept my resignation as delegate from the San Francisco County Medical Society to the 1927 session of the California Medical Association, to take effect immediately."

Dr. A. S. Keenan, San Francisco, moved that the resignation of Dr. T. Henshaw Kelly be accepted; such motion being seconded by Dr. Victor Vecki, San Francisco; whereupon said motion was put and unanimously carried.

IV. Place of 1928 Meeting—The Chair announced that the Council at its meeting held in the afternoon had unanimously selected Sacramento as the place of the annual meeting for 1928; that the date of the meeting would be decided and announced later.

V. Report of the Arrangements Committee—Dr. William Duffield, chairman of the Arrangements Committee, stated he had no report to make for the committee.

VI. Election of Officers—The chairman declared that the next order of business was the election of officers and appointed as tellers Joseph M. King, Los Angeles; R. A. Cushman, Orange; and W. E. Lilley, Merced.

1. President-Elect—The Chair announced that nominations were in order for president-elect. Dr. William H. Kiger of Los Angeles was nominated for president-elect by Fitch C. E. Mattison of Los Angeles; such nomination being seconded by Robert Pollock, San Diego; Oliver D. Hamlin, Oakland; and J. Hunt Shephard, San Jose.

Dr. George Dock of Pasadena was nominated for president-elect by Henry Ullmann of Santa Barbara; such nomination being seconded by William E. Chamberlain, San Francisco.

Philip Stephens of Los Angeles moved that the nominations be closed; such motion being seconded by Oliver D. Hamlin of Oakland.

Lloyd Bryan of San Francisco then made a point of order that the vice-president should be acting in the place of the president and not the president-elect, whereupon Chairman Percy T. Phillips announced that under common parliamentary usage and practice the president being present and on the platform had the right to call any member of the House of Delegates to preside during portions of the meeting, and so ruled.

There being no further nominations the Chair announced that the House would proceed to ballot. Ninety-five ballots were cast, Dr. William H. Kiger receiving seventy-eight votes and Dr. George Dock receiving seventeen votes.

On motion of Henry Ullmann, seconded by William H. Chamberlain and unanimously carried, the vote was made unanimous for William H. Kiger. The Chair then declared William H. Kiger elected president-elect for the year 1927-28.

2. Vice-President—The Chair announced that nominations were in order for vice-president. Thomas Henshaw Kelly of San Francisco was nominated for vice-president by I. W. Thorne of San Francisco; such nomination being seconded by John C. Yates of San Diego.

Clarence G. Toland of Los Angeles moved that the nominations be closed; such motion being seconded by Oliver D. Hamlin; and the secretary instructed to cast the ballot. The secretary cast the ballot, and the Chair declared Thomas Henshaw Kelly elected vice-president for the ensuing year.

VII. Councilors—The Chair announced that election of councilors was the next order of business.

1. Councilor First District—Lyell C. Kinney, San Diego, was nominated by John C. Yates, San Diego, as councilor for the First District, to succeed himself. The nomination was seconded by Henry Ullmann, who then moved that the nominations be closed, and the secretary instructed to cast the ballot. The secretary cast the ballot, and the Chair declared Lyell C. Kinney elected councilor for the First District for the ensuing three years.

2. Councilor Eighth District—Junius B. Harris of Sacramento was nominated by Charles B. Jones, Sacramento, as councilor for the Eighth District, to fill the unexpired term of Doctor Parkinson. The nomination was seconded by Harlan Shoemaker, Los Angeles; Robert Day of Los Angeles and Robert Peers, Colfax.

Fred R. Fairchild of Woodland was nominated by John H. Graves of San Francisco. The nomination was seconded by Alexander S. Keenan, San Francisco.

There being no further nominations the Chair announced that the House would proceed to ballot. Ninety-three ballots were cast; Junius B. Harris receiving fifty-two and Fred Fairchild forty-one. The Chair announced that Junius B. Harris having received the majority of the votes cast was elected councilor for the Eighth Dis-

trict to fill the unexpired term of Dr. James H. Parkinson, which term expires in 1928.

3. Councilor-at-Large—Morton R. Gibbons of San Francisco was nominated by William E. Chamberlain, San Francisco, as councilor-at-large to succeed himself; such nomination being seconded by Henry Ullmann, who then moved that the nominations be closed, and the secretary instructed to cast the ballot. The secretary cast the ballot, and the Chair declared Morton R. Gibbons elected councilor-at-large for the ensuing three years.

4. Councilor Second District—The Chair announced that the election of William H. Kiger as president-elect had left a vacancy in the Council for the unexpired term ending 1928.

William Duffield of Los Angeles was nominated by Joseph M. King, Los Angeles, as councilor for the Second District; such nomination being seconded by George L. Cole of Los Angeles.

William H. Gilbert, Los Angeles, was nominated by John V. Barrow, Los Angeles; such nomination being seconded by A. C. Germann, Los Angeles.

There being no further nominations the Chair announced that the House would proceed to ballot. Ninety-three votes were cast, William Duffield receiving forty-eight and William H. Gilbert forty-five. The Chair announced that William Duffield having received the majority of the votes cast was elected councilor for the Second District to fill the unexpired term of William H. Kiger.

Dr. William H. Gilbert moved that the vote be made unanimous for William Duffield, which motion was seconded by John V. Barrow and unanimously carried.

VIII. Member of the Program Committee—The Chair announced that election of a member of the Program Committee was the next order of business.

Robert V. Day of Los Angeles was nominated by Joseph Catton of San Francisco as a member of the Scientific Committee for the ensuing three years; such nomination was duly seconded.

There being no further nominations the Chair announced that the nominations were closed and instructed the secretary to cast the ballot. The secretary cast the ballot, and the Chair declared Robert V. Day elected member of the Scientific Program Committee for the ensuing three years.

IX. Delegates to the A. M. A.—The Chair announced the next order of business was the election of delegates to the American Medical Association and stated that nominations were in order. The Chair stated that in electing delegates it is understood that their terms do not begin until after the adjournment of the next meeting of the House of Delegates of the American Medical Association at Washington.

Dudley Smith of Oakland was nominated by Joseph Catton of San Francisco as delegate to the American Medical Association; such nomination being seconded by Oliver D. Hamlin.

Clarence Toland of Los Angeles moved that the nominations be closed and the secretary instructed to cast the ballot, which motion was duly seconded. The secretary cast the ballot, and the Chair announced Dudley Smith elected delegate to the American Medical Association for the 1928-29 sessions of the House of Delegates.

Albert Soiland of Los Angeles was nominated by Joseph M. King of Los Angeles as delegate to the American Medical Association; such nomination being seconded by William H. Gilbert of Los Angeles and Victor Vecki of San Francisco.

Henry Ullmann of Santa Barbara moved that the nominations be closed and the secretary instructed to cast the ballot, which motion was duly seconded. The secretary cast the ballot, and the Chair announced Albert Soiland elected delegate to the American Medical Association for the 1928-29 sessions of the House of Delegates.

Martha Welpton of San Diego was nominated by Mott H. Arnold of San Diego as delegate to the American Medical Association; such nomination being seconded by

Henry Ryfkogel of San Francisco and John V. Barrow, Los Angeles.

William H. Gilbert, Los Angeles, then moved that the nominations be closed and the secretary instructed to cast the ballot. The secretary cast the ballot, and the Chair declared Martha Welpton elected delegate to the American Medical Association for the 1928-29 sessions of the House of Delegates.

X. Alternates to the A. M. A.—Walter B. Coffey of San Francisco was nominated by Harlan Shoemaker of Los Angeles as alternate to Dudley Smith; such nomination being seconded by Joseph Catton, San Francisco.

There being no further nominations the Chair announced that the nominations were closed and instructed the secretary to cast the ballot. The secretary cast the ballot, and the Chair declared Walter B. Coffey elected alternate to Dudley Smith for the 1928-29 sessions of the House of Delegates of the American Medical Association.

William H. Gilbert, Los Angeles, was nominated by Walter B. Coffey, San Francisco, as alternate to Albert Soiland; such nomination being seconded by William H. Chamberlain, San Francisco.

There being no further nominations the Chair announced that the nominations were closed and instructed the secretary to cast the ballot. The secretary cast the ballot, and the Chair declared William H. Gilbert, Los Angeles, elected alternate to Albert Soiland for the 1928-29 sessions of the House of Delegates of the American Medical Association.

Eleanor Seymour, Los Angeles, was nominated by Fitch C. Mattison, Los Angeles, as alternate to Martha Welpton; such nomination being seconded by Martha Welpton, San Diego, and Joseph M. King, Los Angeles. Henry Ullmann moved that the nominations be closed, and the secretary instructed to cast the ballot, which motion was duly seconded. The secretary cast the ballot, and the Chair declared Eleanor Seymour elected alternate to Martha Welpton for the 1928-29 sessions of the House of Delegates of the American Medical Association.

XI. Report of the Reference Committee—Harlan Shoemaker, chairman of the Reference Committee, presented the following report:

1. Address of the President—President McArthur's address on the Evolution of Organized Medicine reviews this subject from its foundation to our present time. It touches succinctly upon the advances of the physician and surgeon, which have brought about our greatest thought of "Safety First" in medical standardization, and deals with the effect of health publicity, physical examinations, and the vast amount of public misinformation that has been propagated by uncensored publicity.

The address is recommended to your careful study and entertainment.

On motion of Harlan Shoemaker, duly seconded, the foregoing section of the report of the Reference Committee was unanimously adopted.

2. Report of the President to the House of Delegates—The president's report to the House of Delegates has brought before you again the disparity of the number of members in organized medicine in comparison with those in our Association. He stresses the relation of the hospital staff and county medical meetings, the supporting of standardized hospitals, the participation in questions of public health, the necessity for eternal vigilance in the protection of those industrially injured and cautions you against the too great possibilities of state medicine and socialism.

On motion of Harlan Shoemaker, duly seconded, the foregoing section of the report of the Reference Committee was unanimously adopted.

3. Address of the President-Elect—Doctor Phillips has given you a slogan "None but a physician can think as a physician." This is particularly true in organized medicine in the dissemination to the public of practical knowledge on hygiene and public welfare. No one can feel the sentiment of the public better than the doctor in a small community. The possibilities of ethical advertising have been delicately touched, and a safe bridge has been pointed out from duty to desire.

With Doctor Phillips' great practical knowledge of the

Medical Practice Act, greater prosecution of quacks has been made possible than in any previous time in the history of the state. A great number of amendments to the Medical Practice Act clarifying and interpreting it have been introduced under his direction, particularly so at this last session of the legislature, and I am happy to state on the doctor's behalf that all bills so introduced by the State Board of Medical Examiners were unanimously passed and signed by the Governor.

This in the humble estimation of your committee makes Doctor Phillips one of the outstanding men of our Association.

On motion of Harlan Shoemaker, duly seconded, the foregoing section of the report of the Reference Committee was unanimously adopted.

4. Report of the Chairman of the Council:

(a) Deaths of Doctor Parkinson and Doctor Musgrave—Regarding the deaths of Doctor Parkinson and Doctor Musgrave, the committee calls your attention to the fact that the Council has passed and published in the official journal the resolutions regarding the passing of these two most excellent men and recommends that the House of Delegates endorse the action of the Council.

At the request of the chairman of the Reference Committee the privilege of the floor was given Dr. John H. Graves of San Francisco, who then read the following biography and eulogy on the late Dr. James H. Parkinson, written by his lifelong friend and associate, Dr. William Ellery Briggs:

(N. B. This eulogy is printed in full in another section of the journal and will, therefore, be omitted at this point.)

The House of Delegates and members of the Association present at the meeting paid a last tribute to Dr. James H. Parkinson by standing during the reading of the account of his life and work.

The Reference Committee recommends the eulogy to the attention of the editor.

On motion of Harlan Shoemaker, duly seconded, the foregoing section of the report of the Reference Committee was unanimously adopted.

(b) Report of the Committee on Scientific Program—The combined meeting of the Program Committee with section officers on January 30 was largely responsible for the excellence of the program as given in Los Angeles at the annual meeting, and was productive of the greatest cooperation.

On motion of Harlan Shoemaker, duly seconded, the foregoing section of the report of the Reference Committee was unanimously adopted.

(c) Annual Assessment—The Reference Committee suggests that the recommendation of the Council be accepted and the annual dues set at \$10 for 1928, and so moves.

On motion of Harlan Shoemaker, duly seconded, the foregoing section of the report of the Reference Committee was unanimously adopted.

The remainder of the report of the Council we commend to you for your careful study and approbation, as the financial status of the Association is entirely satisfactory.

On motion of Harlan Shoemaker, duly seconded, the foregoing section of the report of the Reference Committee was unanimously adopted.

5. Report of the Auditing Committee—The Reference Committee suggests that the report of the Auditing Committee receive the endorsement of the House of Delegates, and so moves. This report is on file in the secretary's office, accessible to the membership at any time.

On motion of Harlan Shoemaker, duly seconded, the foregoing section of the report of the Reference Committee was unanimously adopted.

6. Report of the Secretary—The Reference Committee recommends the report of the secretary for approval of the House of Delegates, and so moves for its adoption.

On motion of Harlan Shoemaker, duly seconded, the

foregoing section of the report of the Reference Committee was unanimously adopted.

7. Report of the Editors—The Reference Committee recommends the endorsement of the report of the editors, and so moves.

On motion of Harlan Shoemaker, duly seconded, the foregoing section of the report of the Reference Committee was unanimously adopted.

8. Report of the Attorney—The report of the attorney is commended to you for your most thoughtful consideration and has the hearty approval of the committee, and the committee so moved.

On motion of Harlan Shoemaker, duly seconded, the foregoing section of the report of the Reference Committee was unanimously adopted.

9. Resolutions:

(a) **Honorary Membership**—The Reference Committee recommends the adoption of the resolution presented by Doctor Phillips to grant honorary membership to the persons of John King, Pasadena; R. F. Rooney, Placer County; and M. L. Moore, Los Angeles, and so moves.

(b) **Secretary-Editor**—The resolution presented by Dr. W. E. Chamberlain requesting that the House of Delegates create a position of secretary-editor and recommending Dr. Emma W. Pope, the Reference Committee recommends it be referred to the Council for their consideration, and so moves.

On motion of Harlan Shoemaker, duly seconded, the foregoing sections on honorary membership and secretary-editor was unanimously adopted.

Harlan Shoemaker, chairman of the Reference Committee, then moved that the report of the Reference Committee be approved as a whole, which motion was duly seconded and unanimously carried.

XII. Unfinished Business—Dr. George H. Kress on behalf of the Special Committee on Revision of the Constitution and By-Laws then presented the following amendments to the Constitution and By-Laws:

EDITOR'S NOTE: The various amendments to the Constitution and By-Laws were referred to the special committee, with instructions to compile the same. These will be printed in a later issue of CALIFORNIA AND WESTERN MEDICINE.

XIII. Resolutions of Appreciation—Dr. Robert A. Peers, Colfax, presented the following resolution of appreciation for the success of the 1927 annual meeting:

Resolved, That the thanks of the California Medical Association be tendered to the Los Angeles County Medical Society, the Committee on Arrangements, and the management and staff of the Biltmore Hotel for their generosity, hospitality and elaborate entertainment, which have made the present session so enjoyable, and also the press of the city of Los Angeles for its cooperation and liberality in the interest of constructive publicity.

The resolution was duly seconded and unanimously carried.

Dr. Joseph King, Los Angeles, presented the following resolution of appreciation to invited guests:

Resolved, That the secretary of our Association be instructed to extend to W. W. Campbell, W. A. Evans, D. C. Balfour, Hubert Work, Hugh H. Cumming, James B. Herrick, Stuart McGuire, H. J. Gerstenberger, George N. Middleton, Charles G. Sutherland and Chester N. Rowell, a letter expressing our most profound thanks for coming before us and having spoken to us on scientific subject and having done so much to make this meeting a success; and also to express to Dr. Howard Kelly our regret of his inability to be with us.

The resolution of appreciation of invited guests was duly seconded and unanimously adopted.

XIV. Presentation of the President—At this point President McArthur took the chair and appointed Morton R. Gibbons, San Francisco, and Harlan Shoemaker, Los Angeles, to escort the incoming president to the chair. The president then presented Percy T. Phillips to the House as president of the Association for the ensuing

year. Doctor Phillips commended the outgoing president and thanked him for his efficiency and unflinching kindness and courtesy to all, and expressed appreciation of the honor conferred upon him in being elected president of the California Medical Association.

XV. Presentation of the President-Elect—The president appointed Walter B. Coffey and Robert V. Day to escort the incoming president-elect to the platform. William H. Kiger was then presented to the House as president-elect of the Association for the ensuing year. Doctor Kiger assured the House of his deep appreciation of the honor shown by his election as president-elect.

XVI. Reading and Adoption of Minutes—The minutes of this session were then read and, there being no objection, were unanimously approved.

XVII. Adjournment—There being no further business the House adjourned to meet in Sacramento in 1928.

Ready-Made Bibliographies—In these days of Service (with a Capital S), it is not to be wondered at that enterprising minds have conceived the idea of supplying for writers of medical papers complete bibliographies of the subject treated, and abstracts of the literature dealing with the topic in question. Some arguments can be advanced in favor of this sort of service. More complete bibliographies can doubtless be provided than could be got together by the average writer. There is a saving of labor. Once the agency which supplies such service gets fairly under way, it will have on hand bibliographies and abstracts on all the usual themes, and can dispense them with utter impartiality, so that one writer is as advantageously situated as another, so far as the background culled from the literature is concerned.

Yet in spite of these recommendations, the journal views with alarm this opportunity to buy literary material ready made. In the first place, if the system is widely employed there will be exactly the same bibliography at the end of every article which deals with a given subject. The reader will glance at the long and imposing list of references and will immediately discount its value. His disregard for lists of references will include not only those which were bought and paid for, but will eventually extend to those which represent real effort on the part of the writer. Soon the bibliography appended to an article will have as much weight as the "testimonial" which accompanies the advertisement of a proprietary remedy. In the second place, we doubt if an author can get from a series of abstracts a true appreciation of the opinion of other writers. He would do far better to read carefully a few original articles, than to try to summarize the opinions of a large number from abstracts alone. In the third place, we are sufficiently old-fashioned to believe that true scholarship should depend upon the consultation of original sources and should be based upon honest, conscientious, painstaking labor. A really meritorious communication cannot be written otherwise.—*Boston Medical and Surgical Journal.*

Meetings of the American Urological Association, Western Branch will be held July 5 to July 7 as follows:

July 5—Portland, Oregon—Clinics at the St. Vincent's Hospital.

July 6—Seattle, Washington—Clinics at the Providence Hospital in the morning, and a scientific meeting in the afternoon.

July 7—Vancouver-Canada—Clinics at the Vancouver General Hospital.

"Why are you not working with the rest?" asked the lady visiting the asylum.

"Oh, I'm daft," was the candid reply.

"But surely daft people can work," argued the lady.

"Yes," retorted the inmate, "but I'm not so daft as that."

—*Colorado Med.*

UTAH STATE MEDICAL ASSOCIATION

W. R. CALDERWOOD, Salt Lake.....President
E. H. SMITH, Ogden.....President-Elect
FRANK B. STEELE, Salt Lake.....Secretary
J. U. GIESY, 701 Medical Arts Building, Salt Lake.....Associate Editor for Utah

LIGHT AND HEAT RAYS

Light and heat, like other manifestations of force, have two effects—the one constructive, and the other destructive. That is the point worthy of remembrance. Actinic rays of 2900 Angstrom units and up to 3900 units are constructive. From 2900 to 1800, or even to 1200, they are increasingly destructive. And in this fact lies the explanation of the seeming paradox. Because the average radiant light contains a fairly large per cent of actinic emanations between 2900 and 3900 A. U., and the average actinic ray apparatus emits too large a per cent of the short or destructive actinic elements.

In the light of modern investigation it now appears that the tan developing under either actinic ray therapy or true heliotherapy is a protective reaction of the body aimed at a screening out of the short rays, and that light sickness so called is but a protein reaction indicative of superficial cell destruction and absorption entirely akin to the shock reaction following any type of destructive burn.

What the profession now needs would appear to be an apparatus which will give the long or constructive ray in a larger per cent, while at the same time it reserves its short ray apparatus for its purely local destructive and bacteriacidal effects.

STATE ASSOCIATION MEETING IN JUNE

We trust that every member of the state association will make a serious attempt to attend the 1928 annual meeting of the Utah Medical Association in June.

Whether a man leads or lags in his profession depends largely on whether he mentally holds himself a tip-toe. To keep abreast of modern progress and of the knowledge of our craft and so maintain a high medical standard requires an open mind and a careful selection of the best advances in medicine.

Conventions may not per se teach the average attendant much. Much that he hears necessarily must be rehash of what he already knows. But there is an element in nature known as friction. And it matters little whether it be friction of two opposing surfaces or the oscillation of integral molecules of a substance, or of two individual minds, it produces a reaction whenever it occurs.

Therefore we feel that the greatest good that comes to the attendants of a convention comes from the "friction" with the minds of others engaged in the same pursuits. There is a warming up and an interest-quickenning effect about it. The same thing applies to local societies and to review groups. They accomplish two purposes—they show the individual what he knows and, as it were, solidify his knowledge. And what is more important, show him what he does *not* know and so demonstrate his weak

points and indicate what needs bolstering. Our fellow-men trust their physical welfare to us from birth to death. It behooves us to keep abreast of all knowledge that will enable us to do our professional work to better advantage. Our societies and their meetings are efficient aids to that end.

Program of the June Annual Meeting—Chairman John Z. Brown of the State Association Committee on Scientific Program has been hard at work getting into form a program for our June meeting. The following details should be of general interest:

The week of June 20 to 25 should be one which the members of the state association should encircle with red, in their appointment books. This year there will be three days of postgraduate work, beginning Monday, June 21. Chairman Phipps of the postgraduate committee announces that the program is complete.

Palmer Findley of Omaha is coming to discuss the following subjects: (1) Puerperal Infection; (2) Uterine Hemorrhage; (3) Hemorrhage from the Pregnant Uterus; (4) Cancer of the Uterus; (5) Extrauterine Pregnancy. Dr. Emmet Rixford of San Francisco will discuss Fractures and Dislocations, which are injuries so important in the field of industrial medicine.

Following the three days of postgraduate work will come the state association meeting.

Robert Osgood of Harvard will talk on Orthopedics. Harold L. Amos of Johns Hopkins will speak on Internal Medicine.

Dean Lewis of Johns Hopkins will discuss surgical topics.

Henry Walsh Gibbons of San Francisco will take up the problems of insurance.

Frank Hinman of San Francisco will speak on Urology.

Howard T. Plank of San Francisco will give a series of lectures on Physiotherapy.

Doesn't that list give an anticipatory thrill as you read?

In addition, each day there will be two hours of laboratory demonstrations and talks.

On Friday the 24th will be the annual banquet. An excellent dinner and a big time is promised. It will be a get-together event which will make you glad you came.

Never, we feel, has a better program than this been offered. Get behind it with your presence and make the committees that have arranged it feel that their time has been well spent.

Salt Lake Society Elects Delegates—Twelve delegates were elected at a meeting of the Salt Lake County Medical Association Monday night at the University of Utah to attend the state association meeting to be held here in June, it was announced by Dr. M. M. Critchlow, secretary.

Those elected were Drs. J. P. Kerby, W. G. Schulte, F. A. Goeltz, Foster J. Curtis, W. F. Beer, Ralph Pendleton, J. J. Galligan, S. D. Calonge, E. D. LaCompte, Roy Groesbeck, J. Z. Brown, and C. M. Benedict.

Death of Dr. Warren Benjamin—Dr. Warren Benjamin, 56, one of Utah's foremost physicians and surgeons, died at 6:15 o'clock Saturday evening, following a brief illness.

For twenty-seven years Doctor Benjamin was chief physician and surgeon of the Denver & Rio Grande Western Railroad. He had also been chief surgeon for the Utah Railway Company and the United States Fuel Company since coming here in 1902.

Doctor Benjamin had been on the medical staff of St. Mark's Hospital since he first came to Salt Lake.

Born at Kingston, New York, February 5, 1871, Doctor Benjamin attended the University of New York. In 1900 he was graduated from an internship at Bellevue Hospital, and removed to Denver.

Surviving Doctor Benjamin are his widow, Mrs. Gertrude E. Benjamin, and a brother, Samuel C. Benjamin of Huguenot Park, Stanton Island, New York. An aunt, Mrs. F. B. Dennis of Kingston, New York, also survives.

Holy Cross Hospital Clinical Association Meeting—At the meeting of May 16, Dr. B. E. Bonar gave a review

of recent literature on scarlet fever. Dr. Claude Shields presented a case of severe burn with skin grafting in which galvanism was used to soften resulting scar tissue, and actinic ray therapy to speed up and improve epithelization. T. W. Covington presented an interesting paper on rural versus urban health. This is the last meeting for the spring term.

Salt Lake County Medical Society Meeting of May 9—Sol G. Kahn took the chair and introduced the members who presented clinical cases.

W. G. Schulte read the history, physical, laboratory and x-ray findings on a patient with Kümmel's disease.

E. F. Root presented a patient with severe injury to right thigh caused by an explosion who had been treated for six months with various forms of treatment with apparent good result.

W. D. Donohoe discussed a patient who had suffered from fourteen attacks of iritis over a period of ten years, the focus being found in the teeth.

J. J. Galligan presented a patient with a second fracture of the left tibia, and also a patient with Perthe's disease.

F. B. Bailey read the history, physical, laboratory and x-ray findings on a patient who had an ulcer of the stomach with palpable tumor mass. Pathological specimen was presented and explained by T. A. Flood.

LaFayette P. Monson was unanimously elected to membership in the society.

Minutes of the Salt Lake County Medical Society, Salt Lake City—The regular meeting of the Salt Lake County Medical Society was held in the assembly room, Medical Building, University of Utah, April 25, 1927.

Meeting called to order at 8:10 p. m. by President W. G. Schulte. Forty-six members and three visitors were present.

Minutes of the previous meeting were read and accepted without correction.

R. O. Porter, dean of the Medical School, University of Utah, gave an address of welcome and announced the speakers.

L. L. Daines of the department of pathology and bacteriology gave a splendid talk on "Bacteriophage." He discussed the experiments of Darrell in diseases of the intestinal tract and the distribution of the bacteriophage. He also discussed the therapeutic possibilities.

This interesting talk was discussed by T. F. A. Morton, W. R. Tyndale, and R. O. Porter.

B. I. Burns of the department of anatomy gave a very interesting talk illustrated by lantern slides on the "Anatomy of the Hand," with particular reference to the bursae and the practical importance of their distribution in infections of the hand.

C. M. Benedict reported for the Committee on Public Health and Legislation and recommended a special committee be appointed to investigate the various county organizations doing medical work. The president appointed the following men for this committee: W. T. Ward (chairman), W. F. Beer, and H. B. Sprague.

Application for membership of Doctor Monson was read.

Delegates to the State Medical Association were nominated and the following men were elected:

Delegates—J. P. Kerby, F. J. Curtis, C. M. Benedict, R. W. Pendleton, W. G. Schulte, F. A. Goeltz, W. F. Beer, J. J. Galligan, John Z. Brown, E. D. LeCompte, S. D. Calonge, T. F. H. Morton.

Alternates—R. A. Groesbeck, F. B. Bailey, L. N. Ossman, H. T. Anderson.

Adjournment at 10:10 p. m.

M. M. CRITCHLOW, Secretary.

Weber County News—The graduation exercises of the nurses from the Dee Memorial Hospital training school were held the night of May 11.

Seventeen young women graduated in this class.

The program was in charge of W. H. Wattis, president of the hospital board of trustees.

Adam Bennion of Salt Lake was the speaker of the evening.

Following the formal program a dance was given to the graduating class and their friends at Bethanna Hall.

NEWS

International Health Institute—During the past few months the medical profession has been flooded with letters from the "International Health Institute, Inc.," 2061 Broadway, New York City. According to its "sales talk," the International Health Institute purposes to sell to the public a urinalysis and periodic physical examination service "supplemented with a complete course in body-building and rules of right living." While this is the nominal *raison d'être* of the concern, evidence is accumulating to confirm the suspicion that the International Health Institute, Inc., is primarily a promotion scheme. Letters are sent to physicians stating that the "institute" desires to establish "a resident physician and member of our Advisory and Hygiene Reference Board"; invites the physician to join and to purchase stock. It is stated that the first source of income is the service that is to be recommended by the International Health Institute in selling to the public a periodic physical examination and urinalysis, for which the institute will charge \$37.50, but it is explained that a greater opportunity for financial betterment will come from the activities of the International Health Institute in recommending to the lay subscribers that they use certain health foods; certain "approved exercising devices"; certain "hygienic appliances"; and certain books, all of which the institute will sell.—*Journal A. M. A.*, April 30, 1927, p. 1435.

Counties Freed of Bovine Tuberculosis—A new official order of the Bureau of Animal Industry, United States Department of Agriculture, adds four counties and several parts of counties to the extensive area already freed from bovine tuberculosis. The new counties are Knox County, Indiana; Hartnett County, North Carolina; Lawrence County, Pennsylvania; and Shelby County, Tennessee. Besides these new areas the Government recognizes also, as modified accredited areas, parts of three counties in the state of Vermont. The areas which have earned this recognition are that part of Washington County included in the town of Berlin, the part of Lamoille County included in the town of Johnson, and the part of Caledonia County included in the town of Peacham.

The bureau has also reaccredited other areas for an additional period of three years following completion of necessary tests. The reaccredited areas are Stanly and Stokes counties in North Carolina, and Ohio County in Indiana.

To obtain the recognition mentioned, the cattle of an area must be tested for tuberculosis by a state or federal veterinarian, and the result of the test must show not more than one-half of 1 per cent reactors, such animals, if any, being promptly disposed of by slaughter. The total number of counties in the United States on the modified accredited list is now 306.

The Scarlet Fever Patients—The Scarlet Fever Committee, established to control the use of the methods resulting from the discoveries of the Doctors Dick relating to scarlet fever, has thought it advisable to secure in Great Britain patents similar to those sought in this country for the protection of the manufacture and use of the methods and products. In view of alarm expressed in British medical publications, the Doctors Dick explain that they sought the most competent advice before embarking on the procedure. They reveal that they have not had and will not receive compensation personally from the patents; they have sought only to prevent the manufacture and sale of unworthy or inefficacious products in order that the public might be protected against commercial exploitation.—*Journal A. M. A.*, April 23, 1927, p. 1324.)

Examinations of candidates for entrance into the Regular Corps of the United States Public Health Service will be held at the following-named places on the dates specified:

At Washington, D. C., August 8, 1927.

At Chicago, Ill., August 8, 1927.

At New Orleans, La., August 8, 1927.

At San Francisco, Calif., August 8, 1927.

Candidate must be not less than 23 nor more than 32 years of age, and they must have been graduated in medicine at some reputable medical college, and have had one year's hospital experience or two years' professional practice. They must pass satisfactorily, oral, written, and clinical tests before a board of medical officers and undergo a physical examination.

Successful candidates will be recommended for appointment by the President, with the advice and consent of the Senate.

Requests for information or permission to take this examination should be addressed to the Surgeon-General, United States Public Health Service, Washington, D. C.

The American Orthopedic Association not only conferred upon the medical men of the state of California a signal honor by electing Dr. James T. Watkins of San Francisco president of their organization, but are continuing this recognition, and, for the first time in their history, are holding their annual meeting at Camp Curry in Yosemite Valley, June 13 to 17 inclusive. They invite all medical men, and particularly the Californians, to meet with them at that time and enjoy the benefits of the remarkable scientific program planned for that occasion.

The Arrangement Committee has arranged for special cars to leave the eastern coast on June 4 converging in Chicago, then a special train over the Santa Fe system will take them to the Grand Canyon of the Colorado from where, after spending two days, they will proceed to Los Angeles, arriving there June 10.

The Los Angeles Orthopedic Club will act as host, and will house the entire party at the Huntington Hotel as their guests. On Friday afternoon there will be a "dry clinic" at the hotel. That evening they will be entertained at a banquet at the hotel. On Saturday morning they will be taken to Hollywood where the orthopedists will have the opportunity to examine, first hand, the mechanism of moving-picture making. A luncheon is planned for Saturday noon. That evening they leave for Yosemite Valley, arriving in time for luncheon on Sunday.

Scientific sessions will be held on the afternoons of Monday, Tuesday, and all day Thursday. It is planned that Wednesday will be given up to an all-day trip to the Mariposa big trees, with luncheon at Wawona. The party leaves Friday night for San Francisco.

The San Francisco Orthopedic Club are planning a luncheon at the new San Francisco County Medical Society home with a "dry clinic" in the afternoon. This will be followed by an automobile sight-seeing trip about the city, returning the guests to their headquarters at the Fairmont and Mark Hopkins hotels in time for them to prepare to go to Chinatown for a Chinese banquet. Following the banquet a theater party has been arranged at one of the Chinese theaters.

The ladies of the party while in San Francisco are to be entertained at a luncheon on Saturday at the Olympic Country Club, and an automobile ride as the guests of the San Francisco Guild for Crippled Children.

On Sunday, June 19, the party will break up, some returning direct to the East; others are planning to tour the Northwest, and plans are made by others to go to Alaska.

The Bush Electric Corporation, Travers' Surgical Company, Frank F. Wedekind, and Miss Anna Laurence, manufacturer of nurses' uniforms, wish to announce that, in order to give better service, they are conducting a new display and salesroom located in the Medical Building, 909 Hyde Street, San Francisco. To their many friends and customers they extend a cordial invitation to inspect their new location.

Report on Tuberculosis in San Francisco—The death rate from Tuberculosis among the Chinese people

in San Francisco is over four and one-half times as large as for the rest of the city, according to a report received from the Department of Public Health last night.

The rates for 1926 from all forms of tuberculosis were: Chinese, 459 per 100,000; rest of city, 99.3 per 100,000.

The great difference in rates is apparent at every age, though the greatest difference is found at from 30 to 60 years of age.

"Recent investigation of mortality in Chinatown has revealed some startling differences between it and the rest of the city," said Doctor Hassler, "though the greatest problem among the Chinese is tuberculosis, which caused 24 per cent of Chinese deaths in 1926."

"That this problem is the city's problem as a whole is apparent when we remember the intimate contact that exists between the Chinese and the rest of the city."



Zoological Hospital and Research Institute, San Diego

Zoological Hospital and Research Institute—On the evening of Friday, April 1, the Zoological Hospital and Research Institute was formally dedicated. Approximately 125 physicians and scientific men were present. Dr. C. A. Kofoid, of the University of California, was the speaker of the evening.

This new building was sponsored by the Zoological Society of San Diego, and is the gift of Miss Ellen B. Scripps. It was designed to serve the following purposes:

1. It will be a hospital for the animals in the local zoo.
2. It will afford a wonderful opportunity for a systematic study of animal diseases. In addition, it will serve as a general laboratory where practicing physicians, research professors, and students of biology will find all the requisite equipment and necessary material for prosecuting their studies.

This building is ideally located. It sets back some distance from the main road, and is quietly secluded. It is on the grounds of the Zoological Society, thus giving easy access to the various animals in the zoo. On the lower floor are the following rooms: executive offices, library, autopsy room, technician's laboratory, and the general laboratory, with accommodations for ten or eleven men. On the upper floor there are, in addition to a hospital and isolation room, eleven special laboratories, each equipped for some particular type of work. An x-ray and dark room are also provided. An elevator is installed in the rear part of the building to convey animals to the hospital. A cold storage plant adjoins the autopsy room, so that materials may be kept until such time as needed.

In addition to all the essential equipment for routine work, there has been installed an x-ray, and a photomicrographic outfit. This will make possible almost any type of biological research.

Arrangements are being made with other zoos throughout the United States, whereby diseased tissues from autopsied animals will be collected at this institute. A laboratory technician is employed to prepare all this material for examination. By this means we hope in time to gather a large collection of pathological material, so that

anyone working on a particular problem will have available a remarkable collection of material for examination.

The scope of the building will not be confined to research in apimal diseases. As stated above, the building is equipped for every branch of biological research, so that we hope in time to make this institute an important center of scientific research. Thus, the building will afford to advanced students and college professors an opportunity to continue their studies whenever they are in this part of the country. Many marine stations attract large numbers of scientists annually, but there is no corresponding institute for avian and mammalian research. Therefore, this building with the 1500 birds and animals

in the adjacent zoo, will afford a wonderful opportunity for study in this field.

The building is now complete and fully equipped. It will afford accommodations for twenty-five or thirty men. Any physician who is interested in any research problem is cordially invited to avail himself of the facilities of this institute.

Preliminary Report of the Commission on Medical Education—Anyone who may be interested in the general questions of medical education and practice can obtain a copy of this report without charge by addressing Commission on Medical Education, 215 Whitney Avenue, New Haven, Connecticut.

Index—California and Western Medicine, Volume XXVI, January to June, 1927

CALIFORNIA AND WESTERN MEDICINE has grown to a size where it is no longer possible to bind the twelve issues of one year in the same volume. Therefore, beginning with this year, there will be two volumes a year, one covering the six issues from January to June, inclusive, and the other from July to December, inclusive. Volumes will be numbered serially as heretofore, and each volume will be supplied with an index.

An ever enlarging circle of physicians who read systematically are finding the Cumulative Index published quarterly by the A. M. A., and sold for a nominal subscription, of incalculable value. Everything published in CALIFORNIA AND WESTERN MEDICINE, as well as other worthwhile medical magazines, is completely indexed in the "Cumulative" in a most complete author and subject index. To obtain a copy of this index, write to American Medical Association, 535 North Dearborn Street, Chicago, Illinois.

A

- ABSCCESS, lung, complete recovery from following removal of foreign body from bronchus (case report) (Cheney), 658.
- ABSCCESS, prostatic, surgical treatment of (Hale), 332.
- ABSORPTION of subcutaneous fat deposits at site of repeated insulin injections: report of a case (Davison), 210.
- ACRODYNIA, Case Report (Robinson), 801.
- ACUTE intestinal obstruction (Floersheim), 348.
- ADRENAL tumors, the diagnosis of (Gibson), 201.
- ALDERSON, HARRY E.—Treatment of Pruritus of the Anus and Genitalia, 51.
- ALLEN, R. E., and H. C. SHEPARDSON.—Treatment of Obstinate Obesity, 33.
- ANDERSON, JOHN F.—The Potency Date on Biologics, 75.
- ANEMIA, pernicious, blood transfusion in (Falconer), 465.
- ANEMIA, pernicious, recent developments in, with special reference to the blood serum (Mark), 650.
- APPENDICITIS, chronic (Butka), 467.
- APPENDICOSTOMY, under what conditions, if any, is it justifiable? (Bedside Medicine for Bedside Doctors), 493.
- ARMSTRONG, EUGENE L., and JOHN V. BARROW.—The Etiology and Pathology of Chronic Deforming Arthritis, 323.
- ART and Science of Urology (Rosenkrantz), 787.
- ARTHRITIS, chronic deforming, etiology and pathology of (Barrow and Armstrong), 323.
- ASSOCIATED FEES—Medical and Surgical (Fairchild), 783.
- ATAXIA, a new family group of hereditary and spastic—its distribution in California (Naffziger and Shepardson), 207.
- ATRESIA of the duodenum, congenital (Thompson), 487.
- AURICLE, Restoration of (DeRiver), 654.

B

- BANCROFT, IRVING R.—Syphilis—when is it cured? 489.
- BARROW, JOHN V., and EUGENE L. ARMSTRONG.—The Etiology and Pathology of Chronic Deforming Arthritis, 323.
- BEDSIDE MEDICINE for Bedside Doctors, 77, 213, 352, 493, 660, 804.
- BERMAN, PHOEBUS, and EMIL BOGEN.—Poisonous Spider Bites, With Especial Reference to the Latrodectus Mactans, 339.

- BISMUTH treatment of syphilis, experiences with (Sutton), 197.
- BLOOD transfusion in pernicious anemia (Falconer), 465.
- BLOODGOOD, JOSEPH COLT.—Tissue Diagnosis in the Operating Room, 347.
- BOGEN, EMIL, and PHOEBUS BERMAN.—Poisonous Spider Bites, With Especial Reference to the Latrodectus Mactans, 339.
- BOGEN, EMIL.—The Diagnosis of Drunkenness—A Quantitative Study of Acute Alcoholic Intoxication, 778.
- BOLLINGER, HUGH J.—Toxic reactions from phenobarbital (luminal); report of two cases, 659.
- BRAMKAMP, ROBERT G.—The Effect of Gastric Juice on Carbohydrate Decomposition by Yeast, 196.
- BRONCHUS, clinical thermometer tip in (Smith), 209.
- BROWN, ADELAIDE.—A Survey of Prenatal Care in California, 182.
- BROWN, PHILIP KING, and LEO ELOESSER.—Lung Compression and Surgery of the Lung for the Relief of Tuberculosis, 335.
- BUTKA, HERSEL E.—Chronic appendicitis, 467.
- BUTLER, EDMUND, and EVERETT CARLSEN.—Perforated Ulcers of the Duodenum, Treatment by Horsley or Mayo Pyloroplasty, 478.

C

- CAESAREAN SECTION in Obstructed Pelves (Smith and Kelly), 798.
- CAESAREAN SECTION, what are the essential indications for (Bedside Medicine for Bedside Doctors), 213.
- CANCER, Skin, of the Face and Neck (Lounsberry), 800.
- CARBOHYDRATE decomposition by yeast, effect of gastric juice on (Bramkamp), 196.
- CARCINOMA of the lung, primary (Sherman), 40.
- CARLSEN, EVERETT, and EDMUND BUTLER.—Perforated ulcers of the duodenum, treatment by Horsley or Mayo pyloroplasty, 478.
- CEREBROSPINAL rhinorrhea: report of a case (Frohman), 61.
- CHENEY, GARNETT.—Complete recovery from lung abscess following removal of a foreign body from the bronchus (case report), 658.
- CHISHORE, GEORGE: A Sketch of a True Physician (Montgomery), 644.
- CHRONIC appendicitis (Butka), 467.
- CHRONIC urethritis and some of its causes (Voisard), 75.
- CLAVICLE, dislocations of the outer end of (Dunlop), 38.
- CLEFT lip and palate, congenital (Woolsey), 633.

- CLINICAL thermometer tip in bronchus (Smith), 209.
- COMPLETE recovery from lung abscess following removal of a foreign body from the bronchus (case report) (Cheney), 658.
- CONCERNING the etiology and treatment of measles (Dickson), 345.
- CONGENITAL atresia of the duodenum (Thompson), 487.
- CONGENITAL cleft lip and palate (Woolsey), 633.
- CONTROL of urinary hemorrhage (Ferrier), 480.
- COUGH, chronic, etiological factors in (Voorsanger and Firestone), 48.
- CRETINISM and Its Relation to Thyroid Disease (Tiffin), 795.
- CUTANEOUS Sporotrichosis, Case Report (Gallegos), 802.
- CYST, pancreatic, with diabetes (Timme), 349.

D

- DAVISON, ROLAND A.—Absorption of Subcutaneous Fat Deposits at Site of Repeated Insulin Injections (case report), 210.
- DERMATOLOGIC diagnosis, don'ts in (Scholtz), 347.
- DeRIVER, J. PAUL.—Restoration of the Auricle, 654.
- DIABETES MELLITUS, use and value of carbohydrate tolerance tests in diagnosis of (Rowe and Rogers), 64.
- DIABETES, outlook for the diabetic (Joslin), 178, 328.
- DIABETES, pancreatic cyst with (Timme), 349.
- DIABETIC COMA, insulin treatment of (Leake), 475.
- DIAGNOSIS of adrenal tumors (Gibson), 201.
- DIAGNOSIS of Drunkenness—A Quantitative Study of Acute Alcoholic Intoxication (Bogen), 778.
- DIAGNOSIS of genital lesions (Templeton), 482.
- DICKEY, LLOYD B.—Mongolism in Both of Twins, 344.
- DICKSON, ERNEST C.—Concerning the Etiology and Treatment of Measles, 345.
- DIETS most useful in the treatment of vascular hypertension (Bedside Medicine for Bedside Doctors), 352.
- DILLON, JAMES R.—Ureteral Reflux, 72.
- DISEASES and abnormalities of the female urethra (Stevens), 471.
- DISLOCATIONS of the outer end of the clavicle (Dunlop), 38.
- DON'TS in dermatologic diagnosis (Scholtz), 347.
- DRUNKENNESS, the diagnosis of—a quantitative study of acute alcoholic intoxication (Bogen), 778.

- DUBRAY, ERNEST S., and STANLEY H. MENTZER.—Fatty Atrophy from Injections of Insulin (case report), 212.
- DUNLOP, JOHN.—Dislocations of the Outer End of the Clavicle, 38.
- DUODENUM, congenital atresia of (Thompson), 487.
- DUODENUM, perforated ulcers of, treatment by Horsley or Mayo pyloroplasty (Butler and Carlsen), 478.
- DRUG ADDICTION, should it be a reportable disease? (Bedside Medicine for Bedside Doctors), 77.
- E**
- EDWARDS, JOHN FASSETT.—Some Thoughts on the Psychology of Refraction, 53.
- EFFECT of gastric juice on carbohydrate decomposition by yeast (Bramkamp), 196.
- ELOESSER, LEO, and PHILLIP KING BROWN.—Lung Compression and Surgery of the Lung for the Relief of Tuberculosis, 335.
- EMGE, LUDWIG A.—Some Certain Considerations in Treating the Menopause, 70.
- EPHEDRIN in Adams-Stokes' Syndrome (Hollingsworth), 802.
- ERYSIPELAS, treatment of by roentgen ray (Harrinson and Lawson), 485.
- ETIOLOGICAL factors in chronic cough (Voorsanger and Firestone), 48.
- ETIOLOGY and pathology of chronic deforming arthritis (Barrow and Armstrong), 323.
- EVOLUTION of Organized Medicine (McArthur), 626.
- EXPERIENCES with the bismuth treatment of syphilis (Sutton), 197.
- F**
- FAIRCHILD, FRED R.—Associated Fees—Medical and Surgical, 783.
- FALCONER, ERNEST H.—Blood transfusion in pernicious anemia, 465.
- FATTY ATROPHY from injections of insulin (Mentzer and DuBray), 212.
- FEES, Associated—medical and surgical (Fairchild), 783.
- FERRIER, PAUL.—Control of urinary hemorrhage, 480.
- FIRESTONE, FRED, and WILLIAM C. VOORSANGER.—Etiological Factors in Chronic Cough, 48.
- FLOERSHEIM, SAMUEL.—Acute Intestinal Obstruction (case report), 348.
- FOURTH-YEAR Medical Student and His Life Work (Manning), 637.
- FROHMAN, BERTRAND S.—Cerebrospinal Rhinorrhea, 61.
- G**
- GALLEGOS, PERCY B.—Cutaneous Sporotrichosis, Case Report, 802.
- GASTRIC JUICES, the effect of on carbohydrate decomposition by yeast (Bramkamp), 196.
- GENITAL LESIONS, diagnosis of (Templeton), 482.
- GIBSON, THOMAS E.—The Diagnosis of Adrenal Tumors, 201.
- GUNDRUM, F. F., and J. R. SNYDER.—Hymenolepis Diminuta (case report), 350.
- H**
- HALE, NATHAN G.—Surgical Treatment of Prostatic Abscess, 332.
- HARRINSON, J. EDWARD, and JOHN D. LAWSON.—The treatment of erysipelas by roentgen ray, 484.
- HEMORRHAGE, urinary, control of (Ferrier), 480.
- HINMAN, FRANK, MORRELL VECKI and CLARK M. JOHNSON.—Movable Kidney with Kink or Angulation Versus Ureteral Stricture, 59.
- HISTOLOGY and mortality in tumors of the prostate, bladder, and kidney (Scholl), 185.
- HOLLINGSWORTH, MERRILL W.—Ephedrin in Adams-Stokes' Syndrome, 802.
- HUNTER, W. E.—Prenatal Care, 46.
- HYDRONEPHROTIC SAC, spontaneous rupture of, secondary to Ureteral Stone (Mathé and Oviedo), 790.
- HYMENOLEPIS DIMINUTA: Report of a case (Gundrum and Snyder), 350.
- HYPERTENSION, vascular, diets most useful in treatment of (Bedside Medicine for Bedside Doctors), 352.
- HYPOPHYSIS versus hypothalamus (Lisser), 490.
- I**
- INSULIN, absorption of subcutaneous fat deposits at site of repeated injections of (Davison), 210.
- INSULIN, fatty atrophy from injections of (Mentzer and DuBray), 212.
- INSULIN treatment of diabetic coma (Leake), 475.
- INTESTINAL obstruction, acute (Floersheim), 348.
- J**
- JOHNSON, CLARENCE A.—The Swallowing of a Full-Sized Toothbrush (case report), 210.
- JOHNSON, CLARK M., MORRELL VECKI and FRANK HINMAN.—Movable Kidney with Kink or Angulation Versus Ureteral Stricture, 59.
- JOSLIN, ELLIOTT P.—The Outlook for the Diabetic, 177, 328.
- K**
- KELLY, T. HENSHAW, and REGINALD KNIGHT SMITH.—Caesarean Section in Obstructed Pelvis, 798.
- KERR, WILLIAM J., and L. F. MORRISON.—Tricuspid Disease, 193.
- KIDNEY, movable, with kink or angulation versus ureteral stricture (Hinman, Vecki, and Johnson), 59.
- L**
- LAWSON, JOHN D., and J. EDWARD HARRINSON.—The treatment of erysipelas by roentgen ray, 484.
- LAWSON, THEODORE C.—Volvulus of Entire Small Intestine with Torsion of Mesentery, 189.
- LEAKE, WILLIAM H.—Insulin treatment of diabetic coma, 475.
- LIP and PALATE, Cleft, Congenital (Woolsey), 633.
- LIPIODOL, value of as an aid in neurologic localization (Wolfsohn and Morrissey), 55.
- LISSE, H.—Hypophysis versus hypothalamus, 490.
- LIVER, acute necrosis of (case report) (Reed and Thorne), 657.
- LIVER EXTRACT, observations on use of (Mahoney), 192.
- LOUNSBERRY, C. RAY.—Skin Cancer of the Face and Neck, 800.
- LUNG ABSCESS, complete recovery from following removal of a foreign body from the bronchus (case report) (Cheney), 658.
- LUNG compression and surgery of the lung for the relief of tuberculosis (Brown and Eloesser), 335.
- LUNG, primary carcinoma of (Sherman), 40.
- LUNG, surgery of and compression of for relief of tuberculosis (Brown and Eloesser), 335.
- M**
- MAHONEY, LOUIS E.—Observations on Use of Liver Extract, 192.
- MANNING, JOHN B.—The Fourth-Year Medical Student and His Life Work, 637.
- MARK, ARTHUR E.—Recent Developments in Pernicious Anemia, with Special Reference to the Blood Serum, 650.
- MATHÉ, CHARLES PIERRE, and GEORGE F. OVIEDO.—Spontaneous Rupture of a Hydronephrotic Sac Secondary to Ureteral Stone, 790.
- McARTHUR, WILLIAM T.—The Evolution of Organized Medicine (presidential address), 626.
- McGUIRE, STUART.—The Profit and Loss Account of Modern Medicine, 772.
- McNEILE, LYLE G., and JOHN VRUWINK.—Rectal Analgesia in Obstetrics, 640.
- MEASLES, etiology and treatment of (Dickson), 345.
- MEDICAL Economics and Public Health, 84, 226, 376, 672.
- MEDICAL Problems—Old and New (inaugural address) (Phillips), 629.
- MEDICAL Student, Fourth Year, and His Life Work (Manning), 637.
- MEDICINE in the Department of the Interior (Work), 770.
- MEDICINE TODAY, 222, 361, 497, 669, 809.
- MENOPAUSE, some certain considerations in treating (Emge), 70.
- MENTZER, STANLEY H., and ERNEST S. DUBRAY.—Fatty Atrophy from Injections of Insulin (case report), 212.
- MINIMUM group of symptoms and findings that warrant a diagnosis of syphilis (Bedside Medicine for Bedside Doctors), 660.
- MODERN MEDICINE, the profit and loss account (McGuire), 772.
- MONGOLISM in both of twins (Dickey), 344.
- MONTGOMERY, DOUGLASS W.—George Chismore: A Sketch of a True Physician, 644.
- MORRISON, L. F., and WILLIAM J. KERR.—Tricuspid Disease, 193.
- MORRISSEY, EDMUND J., and JULIAN M. WOLFSON.—On the value of Lipiodol as an Aid in Neurologic Localization, 55.
- MOVABLE KIDNEY with kink or angulation versus ureteral stricture (Hinman, Vecki, and Johnson), 59.
- N**
- NAFFZIGER, H. C., and H. C. SHEPARDSON.—A New Family Group of Hereditary and Spastic Ataxia—Its Distribution in California, 207.
- NECROPSIES, Review of Los Angeles General Hospital (Paine), 796.
- NEUROLOGIC localization, value of lipiodol as an aid in (Wolfsohn and Morrissey), 55.
- NEW family group of hereditary and spastic ataxia—Its distribution in California (Naffziger and Shepardson), 207.
- O**
- OBESITY, Treatment of Obstinate (Shepardson and Allen), 33.
- OBSERVATIONS on use of liver extract (Mahoney), 192.
- OBSTETRICS, Rectal Analgesia in (McNeile and Vruwink), 640.
- ON THE VALUE of lipiodol as an aid in neurologic localization (Wolfsohn and Morrissey), 55.
- ORGANIZED MEDICINE, The Evolution of (McArthur), 626.
- OTTIS MEDIA: When is paracentesis indicated? (Bedside Medicine for Bedside Doctors), 804.
- OUTLOOK for the Diabetic (Joslin), 173, 328.
- OVIEDO, GEORGE F., and CHARLES PIERRE MATHÉ.—Spontaneous Rupture of a Hydronephrotic Sac Secondary to Ureteral Stone, 790.
- P**
- PAINE, NORMAN CARR.—Review of Necropsies, Medical Service, Los Angeles General Hospital, 796.
- PANCREATIC CYST with diabetes (Timme), 349.
- PARKINSON, JAMES H.—A Memorial, by William Ellery Briggs, 803.
- PEDIATRICS, Progress in (Thorn-ton), 785.
- PERNICIOUS ANEMIA, blood transfusion in (Falconer), 465.
- PERNICIOUS ANEMIA, recent developments in, with special reference to the blood serum (Mark), 650.
- PERFORATED ULCERS of the duodenum, treatment by Horsley or Mayo pyloroplasty (Butler and Carlsen), 478.
- PHENOBARBITAL (Luminal) toxic reactions from: report of two cases (Bollinger), 659.

PHILLIPS, PERCY TODD, 769.
 PHILLIPS, PERCY T.—Medical Problems—Old and New, 629.
 POISONOUS spider bites, with especial reference to the latrodectus mactans (Bogen and Berman), 339.
 PRENATAL care (Hunter), 46.
 PRENATAL care in California, a survey of (Brown), 182.
 PRIMARY carcinoma of the lung (Sherman), 40.
 PROFIT and Loss Account of Modern Medicine (McGuire), 772.
 PROGRESS in Pediatrics (Thornton), 785.
 PROSTATIC ABSCESS, surgical treatment of (Hale), 332.
 PRURITUS of anus and genitalia, treatment of (Alderson), 51.

R

RECENT developments in pernicious anemia, with special reference to the blood serum (Mark), 650.
 RECTAL Analgesia in Obstetrics (McNelle and Vruwink), 640.
 REED, ALFRED C., and FRANK E. STILES.—Staphylococcus septicaemia (case reports), 492.
 REED, ALFRED C., and I. W. THORNE.—Acute Necrosis of Liver (case report), 657.
 REFRACTION, some thoughts on the psychology of (Edwards), 53.
 RESTORATION of the Auricle (De River), 654.
 RHINORRHEA, cerebrospinal: report of a case (Frohman), 61.
 RICHTER, INA M.—A Recent Visit to Some of the Clinics of Europe, 693.
 RICKETS at high altitudes, with special reference to its occurrence in Utah (Smith), 341.
 ROBINSON, J. W.—Acrodynia, Case Report, 801.
 ROGERS, HOBART, and ALBERT H. ROWE.—The Use and Value of Carbohydrate Tolerance Tests in the Diagnosis of Diabetes Mellitus, 64.
 ROSENKRANZ, H. A.—Some Remarks on the Art and Science of Urology, 787.
 ROWE, ALBERT H., and HOBART ROGERS.—The Use and Value of Carbohydrate Tolerance Tests in the Diagnosis of Diabetes Mellitus, 64.

S

SCHOLL, A. J.—Histology and Mortality in Tumors of the Prostate, Bladder, and Kidney, 185.
 SCHOLTZ.—Don'ts in Dermatologic Diagnosis, 347.
 SHEPARDSON, H. C., and H. C. NAFFZIGER.—A New Family Group of Hereditary and Spastic Ataxia—Its Distribution in California, 207.
 SHEPARDSON, H. C., and R. E. ALLEN.—Treatment of Obstinate Obesity, 33.
 SHERMAN, JULIUS.—Primary Carcinoma of the Lung, 40.
 SHOULD drug addiction be a reportable disease—Give reasons? (Bedside Medicine for Bedside Doctors), 77.
 SKIN CANCER of the Face and Neck (Lounsberry), 800.
 SMITH, EUGENE H.—Rickets at High Altitudes, with Special Reference to Its Occurrence in Utah, 341.
 SMITH, REGINALD KNIGHT, and T. HENSHAW KELLY.—Caesarean Section in Obstructed Pelvis, 798.
 SMITH, WALLACE BRUCE.—Clinical Thermometer Tip in Bronchus (case report), 209.
 SNYDER, J. R., and F. G. GUNDRUM.—Hymenolepis Diminuta (case report), 350.
 SOME certain considerations in treating the menopause (Emge), 70.
 SOME thoughts on the Psychology of refraction (Edwards), 53.
 SPIDER BITES, poisonous, with especial reference to the latrodectus mactans (Bogen and Berman), 339.

SPONTANEOUS RUPTURE of a Hydro nephrotic Sac Secondary to Ureteral Stone (Mathé and Oviedo), 790.
 SPOROTRICHOSIS, cutaneous, case report (Gallegos), 802.
 STAPHYLOCOCCUS septicaemia: case reports (Reed and Stiles), 492.
 STEVENS, WILLIAM S.—Diseases and abnormalities of the female urethra, 471.
 STILES, FRANK E., and ALFRED C. REED.—Staphylococcus septicaemia, 492.
 SURGICAL treatment of prostatic abscess (Hale), 332.
 SURVEY of prenatal care in California (Brown), 182.
 SUTTON, IRWIN C.—Experiences with the Bismuth Treatment for Syphilis, 197.
 SWALLOWING of a full-sized toothbrush: report of a case (Johnson), 210.
 SYPHILIS, experiences with the bismuth treatment of (Sutton), 197.
 SYPHILIS, minimum group of symptoms and findings that warrant a diagnosis of (Bedside Medicine for Bedside Doctors), 660.
 SYPHILIS—When is it cured? (Bancroft), 489.

T

TEMPLETON, H. J.—Diagnosis of genital lesions, 482.
 TESTICLE and SCROTUM, X-Ray and Conservative Surgery in the Treatment of Malignant Tumors of (Abstract) (Wesson), 648.
 THOMPSON, C. VERNER.—Congenital atresia of the duodenum, 487.
 THORNE, I. W., and ALFRED C. REED.—Acute Necrosis of Liver (case report), 657.
 THORNTON, ANDREW J.—Progress in Pediatrics, 785.
 TIFFIN, CHARLES CALVIN.—Cretinism and Its Relation to Thyroid Disease, 795.
 TIMME, ARTHUR R.—Pancreatic Cyst with Diabetes (case report), 349.
 TISSUE DIAGNOSIS in the operating room (Bloodgood), 347.
 TOXIC reactions from phenobarbital (luminal): report of two cases (Bollinger), 659.
 TREATMENT of erysipelas by roentgen ray (Harbinson and Lawson), 485.
 TREATMENT of obstinate obesity (Shepardson and Allen), 33.
 TREATMENT of pruritus of the anus and genitalia (Alderson), 51.
 TRICUSPID DISEASE (Kerr and Morrison), 193.
 TUBERCULOSIS, lung compression and surgery of the lung for the relief of (Brown and Eloesser), 335.
 TUMORS, adrenal, diagnosis of (Gibson), 201.
 TUMORS, Malignant, of Testicle and Scrotum, X-Ray and Conservative Surgery in the Treatment of (Abstract) (Wesson), 648.
 TUMORS of prostate, bladder and kidney, histology and mortality in (Scholl), 185.

U

ULCERS of the duodenum, perforated, treatment by Horsley or Mayo pyloroplasty (Butler and Carlsen), 478.
 UNDER what conditions, if any, is appendicostomy justifiable? (Bedside Medicine for Bedside Doctors), 493.
 URETERAL REFLUX (Dillon, James R.), 72.
 URETERAL STRICTURE, movable kidney with kink or angulation versus (Hinman, Veckl, and Johnson), 59.
 URETHRA, female diseases and abnormalities of the (Stevens), 471.
 URETHRITIS, chronic, and some of its causes (Voisard), 75.
 URINARY HEMORRHAGE, control of (Ferrier), 480.

UROLOGY, art and science of (Rosenkranz), 787.
 USE AND VALUE of carbohydrate tolerance tests in the diagnosis of diabetes mellitus (Rowe and Rogers), 64.

V

VASCULAR HYPERTENSION, diets most useful in treatment of (Bedside Medicine for Bedside Doctors), 352.
 VECKI, MORRELL, FRANK HINMAN and CLARK M. JOHNSON.—Movable Kidney with Kink or Angulation Versus Ureteral Stricture, 59.
 VOISARD, FRANCIS X.—Chronic Urethritis and Some of Its Causes, 75.
 VOLVULUS of entire small intestine with torsion of mesentery (Lawson), 189.
 VOORSANGER, WILLIAM C., and FRED FIRESTONE.—Etiological Factors in Chronic Cough, 48.
 VRUWINK, JOHN, and LYLE G. MCNEILLE.—Rectal Analgesia in Obstetrics, 640.

W

WESSON, MILEY B.—The X-Ray and Conservative Surgery in the Treatment of Malignant Tumors of the Testicle and Scrotum, 648.
 WHAT are the Essential Indications for Caesarean Section? (Bedside Medicine for Bedside Doctors), 213.
 WOLFSOHN, JULIAN M., and EDMUND J. MORRISSEY.—On the Value of Lipiodol as an Aid in Neurologic Localization, 55.
 WOOLSEY, JOHN HOMER.—Congenital Cleft Lip and Palate, 633.
 WORK, HUBERT.—Medicine in the Department of the Interior, 770.

EDITORIALS

A 1927 Membership Campaign for the County Units, 665.
 Addresses of Presidents McArthur and Phillips, 666.
 Alleged Medicinal Virtues of Carbonated Beverages, 82.
 Blaming the Cost of Sickness on Doctors and Hospitals, 667.
 Certified Milk, 808.
 Curing Crippled Children by Legislation, 358.
 Current Theories of Cardiac Output and the Alleged Sedative Action of Digitalis on the Heart, 359.
 Editorial Announcement, 497.
 Health Mergers, 81.
 In the Legislative Hopper, 357.
 Influence of Symbiosis on Microorganisms: the Evolution of Parasitism, 80.
 Los Angeles Meeting, 668.
 Membership Campaign for the County Units, 665.
 Newly Elected Officers, 668.
 Organotropic versus Etiotropic Action in Therapeutics, 219.
 "Papa Spank," 496.
 Progress in Clean Medical Advertising, 667.
 Proposed Government Monopoly of Industrial Medical Practice, 217.
 Recent Legislation, Prospective and Attained, 806.
 Scleropsists at the Legislature, 360.
 Speaking of Doctors, 83.
 The A. M. A. and the Volstead Act, 808.
 The Passing of a Beloved Physician (William Everett Musgrave), 495.
 Variola Statistics for 1926, 807.
 Who Are the Indigent? 217.

MEDICAL ASSOCIATIONS

California Medical Association, 86, 229, 377, 531, 675, 817.
 Amendments to Constitution and By-Laws (second publication), 93.
 Council Minutes, 163rd, 164th, 165th Meetings, 679.
 Minutes of House of Delegates, Fifty-Sixth Annual Session, 822.
 Program of Fifty-Sixth Annual Session, 508.
 Nevada Medical Association, 235.
 Utah Medical Association, 96, 234, 382, 537, 689, 829.
 California Board of Medical Examiners, 100, 240, 385, 540, 695.



1928 Session California Medical Association will be held at Sacramento

CALIFORNIA AND WESTERN MEDICINE

OWNED AND PUBLISHED BY THE CALIFORNIA MEDICAL ASSOCIATION

Accredited representative of the California, Nevada and Utah Medical Associations

Contributors to This Issue

HUBERT WORK

Medicine in the Department of the Interior

STUART McGUIRE

The Profit and Loss Account of Modern Medicine

EMIL BOGEN

The Diagnosis of Drunkenness—A Quantitative Study of Acute Alcoholic Intoxication

FRED R. FAIRCHILD

Associated Fees—Medical and Surgical

ANDREW J. THORNTON

Progress in Pediatrics

H. A. ROSENKRANZ

Some remarks on the Art and Science of Urology

CHARLES PIERRE MATHÉ AND GEORGE F. OVIEDO

Spontaneous Rupture of a Hydronephrotic Sac Secondary to Ureteral Stone

CHARLES CALVIN TIFFIN

Cretinism and Its Relation to Thyroid Disease

NORMAN CARR PAINE

Review of Necropsies, Medical Service, Los Angeles General Hospital

R. KNIGHT SMITH AND T. HENSHAW KELLY

Caesarean Section in Obstructed Pelves

C. RAY LOUNSBERRY

Skin Cancer of the Face and Neck

For Complete Contents see Page 738

Volume XXVI

JUNE • 1927

Number 6

How high protein feedings with carbohydrate additions can be used to correct fermentative (summer) diarrhoea

FERMENTATIVE (summer) diarrhoea in infants is now recognized in the majority of cases as being due to excessive fermentation of carbohydrates. The stools are usually distinguished as being greenish in color, acid in odor, irritating to the skin, and with or without mucous.

The correction of fermentative diarrhoea is accomplished by the control of the bacterial activity in the intestines which produces the disturbance.

A rational way to combat the excess activity of acid-forming bacteria is temporarily to reduce the carbohydrate and increase the amount of protein in the feeding. This may be done by adding Casec to diluted cow's milk. The administration of this mixture usually produces less frequent stools and of a paste-like consistency within one or two days.

After two or three days of such feedings, Mead's Dextri-Maltose is the form of carbohydrate usually added gradually to the feedings to prevent carbohydrate starvation. Mead's Dextri-Maltose is the carbohydrate most easily assimilated, having greater limits of tolerance in infants recovering from fermentative diarrhoea.

Samples and Literature on Request

MEAD JOHNSON & CO.
Evansville, Indiana



*Mead's Casec
(Calcium Caseinate)*



*Mead's
Dextri-Maltose*



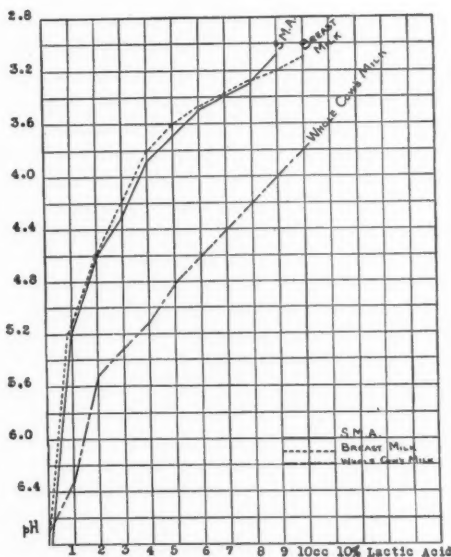
Question

WHY is it not necessary to add an acid to *S. M. A.*?

Answer

For the same reason that it is not necessary to add an acid to breast milk.

See chart



This chart shows the buffer curve of breast milk and cow's milk—and the similarity of the buffer curve of *S. M. A.* and breast milk.

Write for Literature and a Liberal Supply

Manufactured by permission of the
Babies and Childrens Hospital of Cleveland
by

THE LABORATORY PRODUCTS COMPANY
CLEVELAND, OHIO

Fine Products for the Infant's Diet

Requests for samples and literature west of the Rocky Mountains should be addressed to the *S. M. A. West Coast Company*, 401 Phelan Building, San Francisco, California

ALL RELIABLE MAKES OF
SERUMS—VACCINES—ANTITOXINS

Delivered to Any Part of the State Free of Charge

LENGFELD'S PHARMACY

216 STOCKTON STREET, Telephone Sutter 80 1804 FILLMORE STREET, Telephone West 1885



**TYCOS APPARATUS FOR CARDIO
RESPIRATORY TEST**

Doctor Frost's article sent gratis on request

BISCHOFF'S SURGICAL HOUSE

The House of Service

New Location

ELKS BUILDING
Twentieth near Broadway
OAKLAND, CALIF.

Branch

68 South First Street
SAN JOSE, CALIF.

CLINICAL LABORATORY

of

Drs. Brem, Zeiler and Hammack

WALTER V. BREM, M. D.

ROY W. HAMMACK, M. D.

A. H. ZEILER, M. D.

Service limited to hospitals and to doctors eligible to membership in the American Medical Association, and to dentists and veterinarians who are members of their official societies.

Exceptions—non-medical laboratory work and governmental agencies.

Pathologists to the Following Hospitals

California Lutheran Hospital, Hospital of the Good Samaritan,
Kaspere Cohn Hospital, Santa Fe Hospital.

Consulting Pathologists to

Kern General Hospital, Los Angeles General Hospital (Dr. Hammack),
Riverside Community Hospital

1003 Pacific Mutual Building, Los Angeles, California
Telephone: MEtropolitan 4720

1010